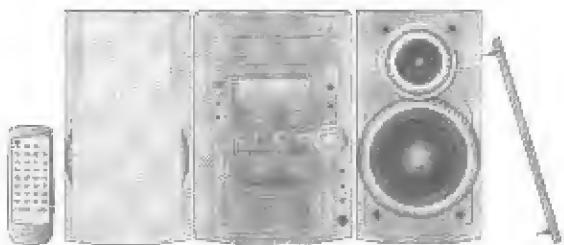
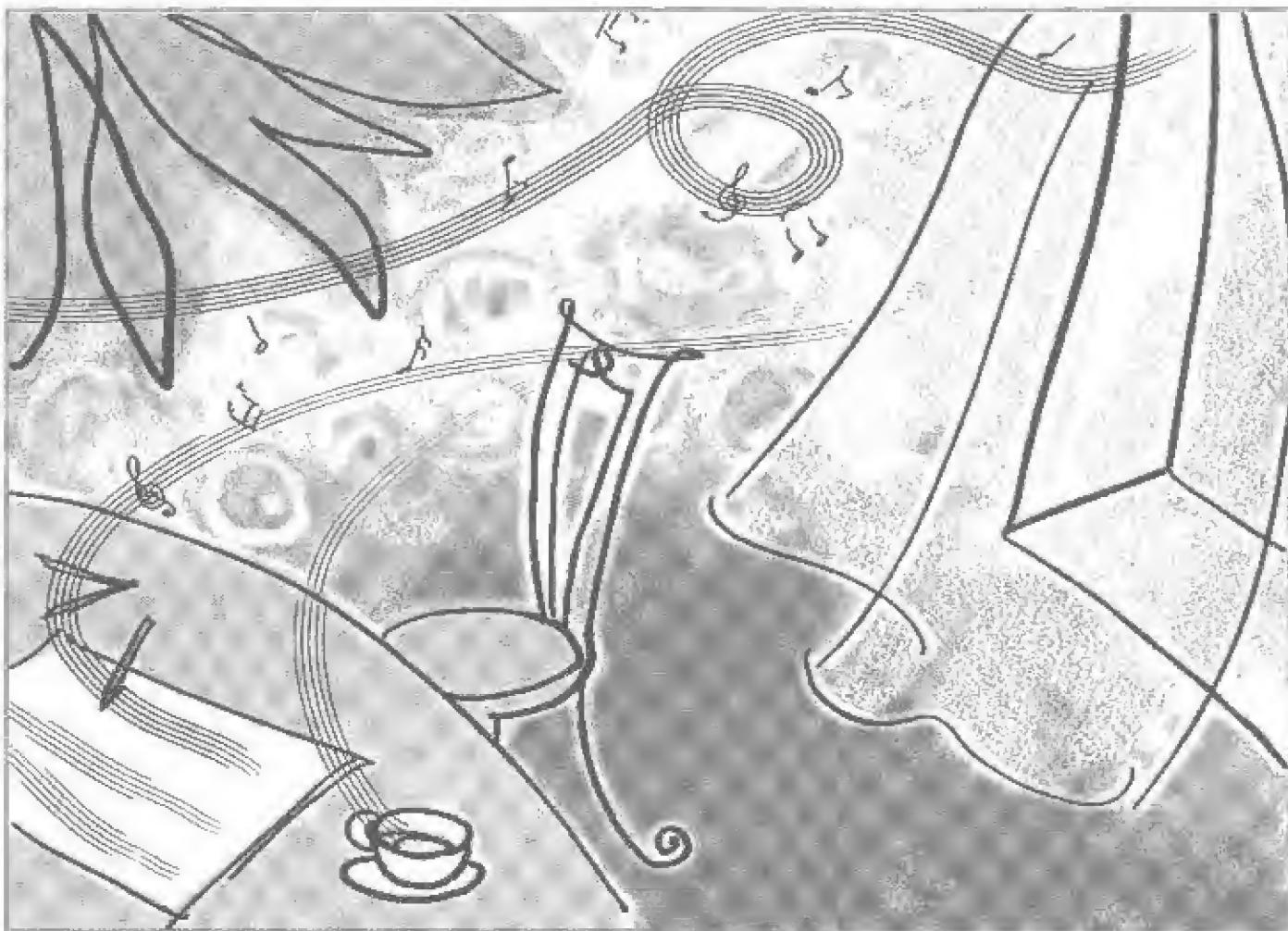


# Panasonic®



## CD Stereo System Operating Instructions

Model No. **SC-PM12**  
**SC-PM11**



COMPACT  
**DISC**  
DIGITAL AUDIO

Before connecting, operating or adjusting this product, please read these instructions completely.  
Please keep this manual for future reference.

# Dear customer

Thank you for purchasing this product.  
For optimum performance and safety, please read these instructions carefully.

These operating instructions are applicable to the following system.

<b>System</b>	SC-PM12	SC-PM11
Main unit	SA-PM12	SA-PM11
Speakers	SB-PM11	SB-PM11

The model number and serial number of this product can be found on either the back or the bottom of the unit.  
Please note them in the space provided below and keep for future reference.

MODEL NUMBER \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

## User memo:

DATE OF PURCHASE \_\_\_\_\_

DEALER NAME \_\_\_\_\_

DEALER ADDRESS \_\_\_\_\_

TELEPHONE NUMBER \_\_\_\_\_

## CAUTION!

THIS PRODUCT UTILIZES A LASER.  
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE  
OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN  
MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.  
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF.  
REFER SERVICING TO QUALIFIED PERSONNEL.

## WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR  
PRODUCT DAMAGE, DO NOT EXPOSE THIS APPARATUS  
TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT  
NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES,  
SHALL BE PLACED ON THE APPARATUS.

## CAUTION:

TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF  
PLUG TO WIDE SLOT, FULLY INSERT.

## CAUTION!

DO NOT INSTALL, OR PLACE THIS UNIT, IN A BOOKCASE,  
BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE.  
ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT  
RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO  
OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER  
MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.

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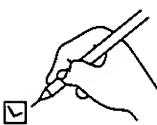
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## Supplied accessories



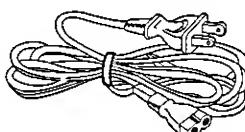
Please check and identify the supplied accessories.

Use numbers indicated in parentheses when asking for replacement parts.

(Only for U.S.A.)

To order accessories contact 1-800-332-5368  
or web site (<http://www.panasonic.com>).

<input type="checkbox"/> AC power supply cord .....	1 pc. (RJA0065-A)
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<input type="checkbox"/> FM indoor antenna (RSA0006-L) .....	1 pc.
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**Recording operations**

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**THE FOLLOWING APPLIES ONLY IN THE U.S.A.:****CAUTION:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

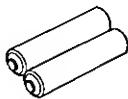
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

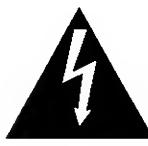
Any unauthorized changes or modifications to this equipment would void the user's authority to operate this device.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

AM loop antenna (RSA0033A) ..... 1 pc.     Batteries ..... 2 pcs. (R6, AA, UM-3)



Remote control transmitter ..... 1 pc. (N2QAGB000007)



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

# IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit. Follow the safety instructions on the unit and the safety precautions listed below. Keep these operating instructions handy for future reference.

## Safety

- Power source**—Connect the unit to a power source of the type described in these instructions or as marked on the unit.
- Polarization**—The unit is equipped with a polarized power plug where one blade is wider than the other. This safety feature ensures that the plug fits into your household AC outlet only one way. If the plug doesn't fit one way, try reversing it. If the plug still doesn't fit, contact an electrician to replace the obsolete outlet. Do not attempt to defeat the safety purpose of the plug.
- Power cord protection**—Route the AC power supply cord so that it will not be walked on or pinched by items placed on or against it. Never take hold of the plug or cord with wet hands. Always grasp the plug body firmly when connecting and disconnecting it.
- Overloading**—When connecting the AC power supply cord, be careful not to overload the household AC outlet, extension cord, or outlet from any other device as this can result in fire or electric shock.
- Nonuse periods**—Turn the unit off when it is not in use. Unplug the unit from the household AC outlet if it is not to be used for a long time. Unplug the unit during lightning storms.
- Attachments and accessories**—Use only the attachments and accessories recommended in these operating instructions.

## Installation

### Placement

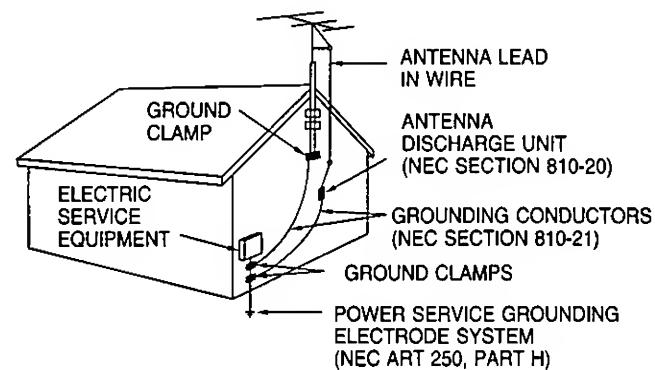
- Ventilation**—Situ ate the unit so that it receives proper ventilation. Do not install in a confined space such as a bookcase or cabinet. Allow at least 10 cm (4 inches) clearance from the rear of the unit. To prevent the risk of electric shock or fire due to overheating ensure curtains and other materials do not obstruct the unit's ventilation.
- Foreign material**—Ensure objects and liquids do not get into the unit. Avoid exposing the unit to excessive smoke, dust, mechanical vibration, and shock.
- Magnetism**—Situ ate the unit away from equipment and devices that generate strong magnetic fields.
- Stacking**—Do not place heavy objects on top of this unit.
- Surface**—Place the unit on a flat, level surface.
- Carts and stands**—Use the unit only with carts and stands recommended by the manufacturer. Move carts with care. Sudden stops, excessive force, and uneven surfaces can cause carts to overturn.
- Wall and ceiling mounting**—Do not mount the unit on walls or ceilings unless specified in the instructions.



### Environment

- Water and moisture**—Do not use the unit near water, such as near a bathtub or swimming pool. Avoid damp basements.
- Heat**—Situ ate the unit away from heat sources, such as radiators. Do not situate where temperatures fall below 5°C (41°F) or rise above 35°C (95°F).
- Power lines**—Take care when setting up an outdoor antenna that it is not near overhead power lines, electric lights, or electrical circuits, and that there is no danger of the antenna falling on power lines, electric lights, or electrical circuits. When installing an outdoor antenna, take extreme care not to touch such power lines or circuits, as contact with them can be fatal.

- Outdoor antenna grounding**—If you connect an outdoor antenna, ground the antenna system to protect against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1990, provides information about grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. Refer to this diagram.



NEC—NATIONAL ELECTRICAL CODE

## Maintenance

(See back cover for details.)

Unplug the unit from the household AC outlet before cleaning. Clean with a damp cloth. Do not use abrasive pads, scouring powders, or solvents.

## Service

- Damage requiring service**—The unit should be serviced by qualified service personnel if:
  - The AC power supply cord or the plug has been damaged; or
  - Objects or liquids have gotten into the unit; or
  - The unit has been exposed to rain; or
  - The unit does not operate normally or exhibits a marked change in performance; or
  - The unit has been dropped or the cabinet damaged.
- Servicing**—Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.
- Replacement parts**—When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.
- Safety check**—After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

## Concerning the remote control

### Listening caution



Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion—and, most importantly, without affecting your sensitive hearing.

We recommend you to avoid prolonged exposure to excessive noise.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing.

Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

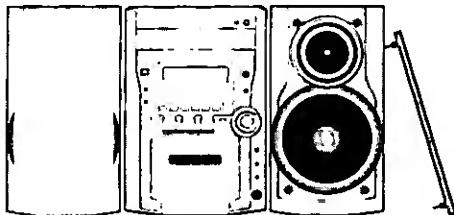
Once you have established a comfortable sound level:

- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

### Placement of speakers

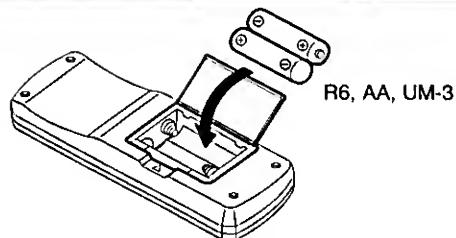
Speakers are designed identically so that no left or right channel orientation is necessary.



#### Notes

- Keep your speakers at least 10 mm (13/32") away from the system for proper ventilation.
- These speakers do not have magnetic shielding. Do not place them near televisions, personal computers or other devices easily influenced by magnetism.
- To avoid damage to the speakers, do not touch the speakers cones if you have taken the nets off.

### Battery installation



Insert the batteries observing the correct polarities (+, -).

#### Use of batteries

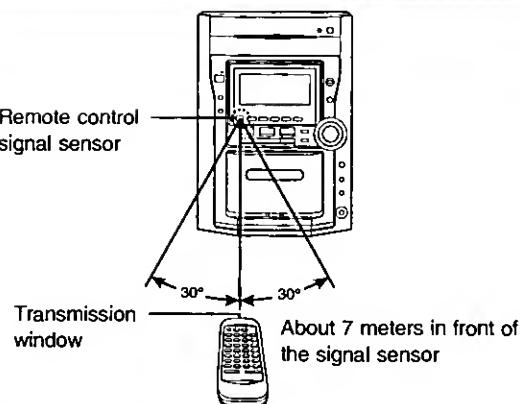
- Align the poles (+ and -) properly when inserting the batteries.
- Do not mix old and new batteries or different types of batteries.
- Do not recharge ordinary dry cell batteries.
- Do not heat or disassemble the batteries. Do not allow them to contact flame or water.
- Remove the batteries if the unit is not to be used for a long time.
- Do not keep together with metallic objects such as necklaces.
- Do not use rechargeable type batteries.
- Do not use batteries if the covering has been peeled off.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

If electrolyte leaks from the batteries, consult your dealer.

Wash thoroughly with water if electrolyte comes in contact with any part of your body.

### Correct method of use

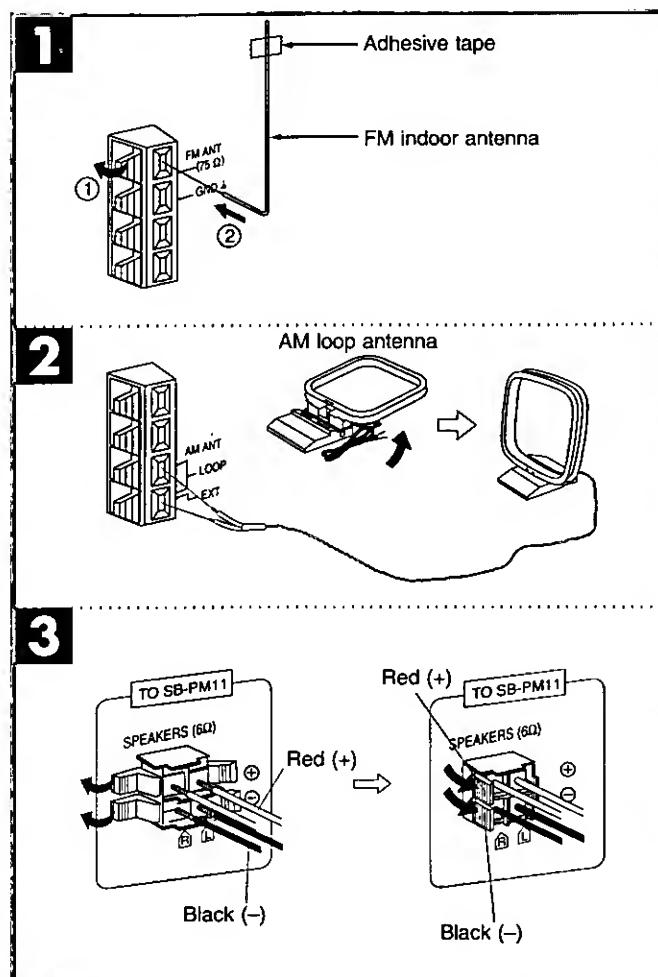
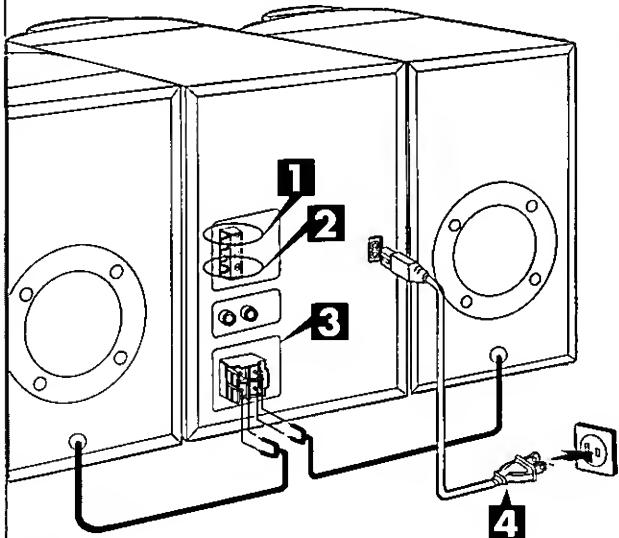


#### Operation notes

- Do not place obstacles between the remote control signal sensor and remote control unit.
- Do not expose the remote control signal sensor to direct sunlight or to the bright light of a fluorescent light.
- Take care to keep the remote control signal sensor and end of the remote control unit free from dust.
- If this system is installed in a rack with glass doors, the glass doors' thickness or color might make it necessary to use the remote control a shorter distance from the system.

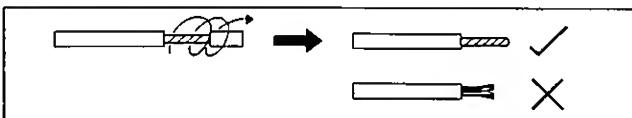
#### To prevent damage

- Never place heavy items on top of the unit.
- Do not disassemble or reconstruct the unit.
- Do not spill water or other liquids into the unit.



### Basic connections (for supplied accessories)

- Plug the AC power cord into a household AC outlet only after all other connections have been made.
- To prepare the antenna wires and speaker cords, twist the vinyl cover tip and pull off.



#### 1 Connect the FM indoor antenna.

Tape the antenna to a wall or column, in a position where radio signals are received with the least amount of interference.

##### Note

**For best reception sound quality:**

An FM outdoor antenna is recommended. (See page 7.)

#### 2 Connect the AM loop antenna.

After attaching the antenna, turn on the system and tune in a broadcast station. Then, turn the antenna to the angle of best reception and least interference.

#### 3 Connect the speaker cables.

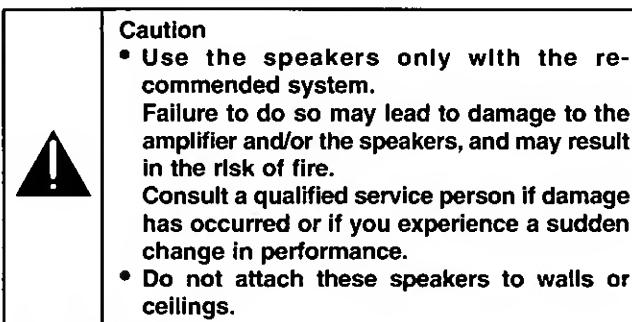
Connect each end of the speaker cables to the terminal lever of the same color so (+) and (-) are correct. Never allow the exposed wires to contact each other when connected.

**Incorrect connection can damage the unit.**

##### Caution

- Use only the supplied speakers.

The combination of the main unit and speakers provide the best sound. Using other speakers can damage the unit and sound quality will be negatively affected.



#### 4 Connect the AC power cord.

##### Note

The included AC power supply cord is for use with this unit only. Do not use it with other equipment.

**Connections****Optional antenna connections**

You may need an outdoor antenna if you use this system in a mountainous region or inside a reinforced-concrete building, etc.

**A FM outdoor antenna**

Disconnect the FM indoor antenna if an FM outdoor antenna is installed.

- ① Remove a piece of the outer vinyl insulator.  
30 mm  
(1 3/16")
- ② Twist the shield braid.  
15 mm  
(19/32")
- ③ Expose the core wire.

**Note**

An outdoor antenna should be installed by a qualified technician only.

**B AM outdoor antenna**

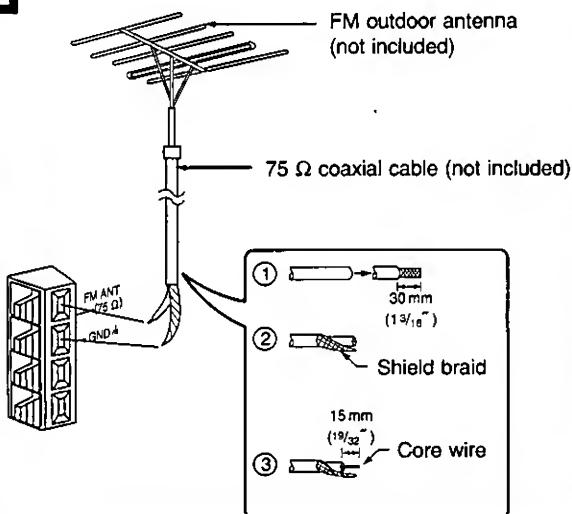
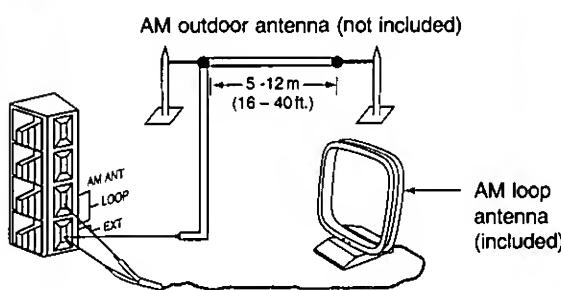
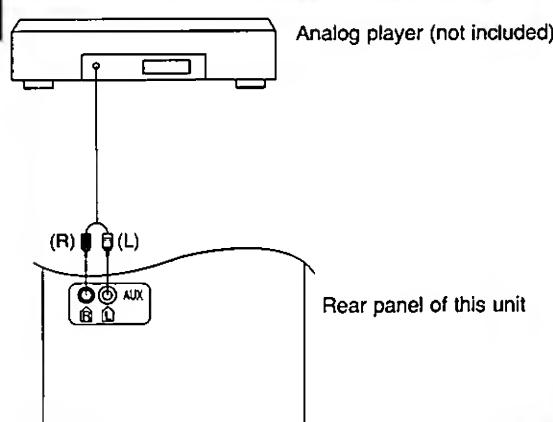
Connect the outdoor antenna without removing the AM loop antenna. Run 5 to 12 m of vinyl-covered wire horizontally along a window or other convenient location.

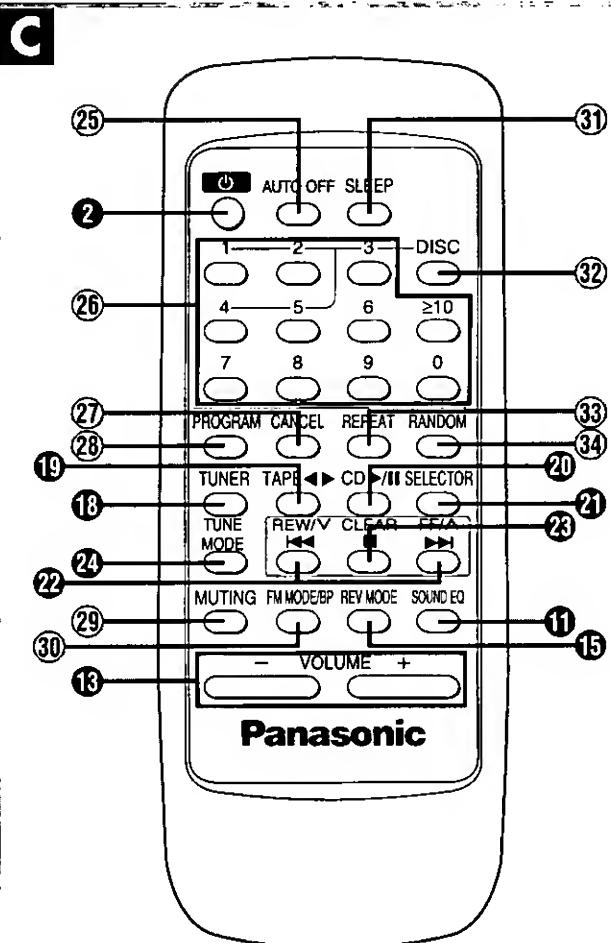
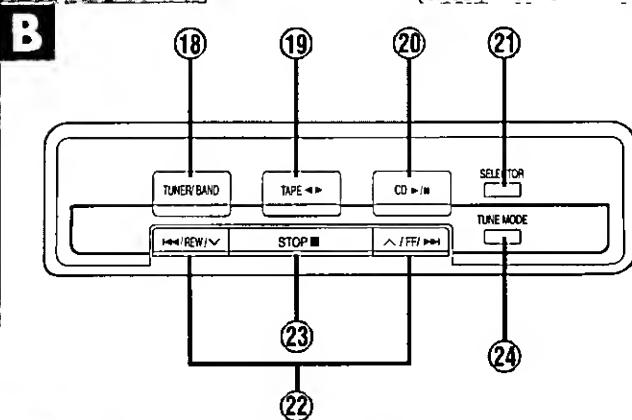
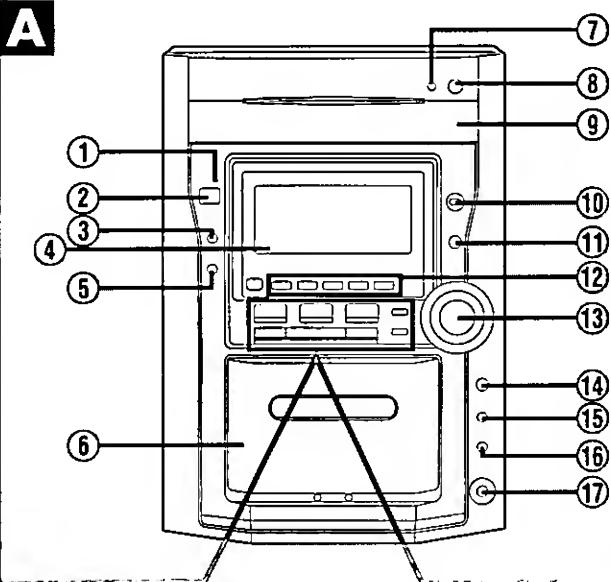
**Note**

When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.

**C External unit connection**

- An analog player with a built-in phono equalizer can be connected.
- For details, refer to the instruction manual of the units which are to be connected.
- When units other than those described above are to be connected, please consult with your audio dealer.

**A****B****C**



## Front panel controls

### A Main unit

No.	Name	Ref. page
①	AC supply indicator (AC IN)	
	This indicator lights when the unit is connected to the AC power supply.	
②	Standby/on switch (S/I, POWER)	
	Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.	
③	Clock/timer and demonstration button (CLOCK/TIMER, -DEMO)	9, 22, 23
④	Display	
⑤	Play timer/record timer button (PLAY/REC)	22
⑥	Cassette holder	17
⑦	CD manager button (CD MANAGER)	14, 20
⑧	CD tray open/close button (CD OPEN/CLOSE)	11
⑨	Disc tray	
⑩	Super sound equalizer button (SUPER SOUND EQ)	21
⑪	Sound equalizer control (SOUND EQ)	21
⑫	Disc direct play button (CD 1 ~ CD 5)	11
⑬	Volume control (VOLUME Down, Up)	11
⑭	Deck open button (DECK OPEN)	17
⑮	Reverse mode select button (REV MODE)	17
⑯	Recording start/pause button (REC/II)	19
⑰	Headphone jack (PHONES)	24

### B Center console

⑯	Tuner/band select button (TUNER/BAND)	15
⑯	Tape play/direction button (TAPE ▶▶)	17
⑯	CD play/pause button (CD ▶/II)	11
⑯	CD, Tuner, Tape, Aux select button (SELECTOR)	13, 24
⑯	Skip/Search/Preset channel button (◀◀/REW/V, ▲/FF/►►)	11, 16, 18
⑯	CD, Tape stop button (STOP ■)	11, 17
⑯	Tuning mode select button (TUNE MODE)	15

### C Remote control

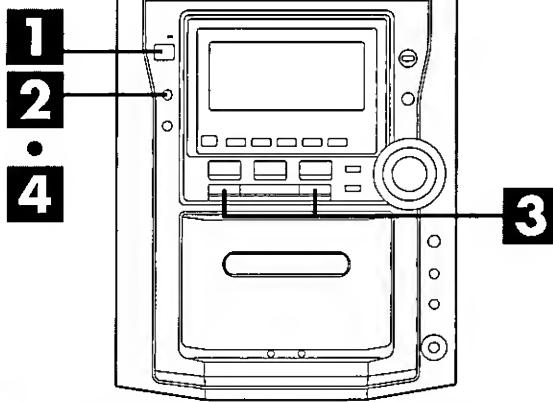
Buttons such as ② functions in exactly the same way as the buttons on the main unit.

No.	Name	Ref. page
⑯	Auto off button (AUTO OFF)	9
⑯	Numeric buttons (≥10, 1~9, 0)	12, 13
⑯	Cancel button (CANCEL)	13
⑯	Program button (PROGRAM)	13
⑯	Muting button (MUTING)	21
⑯	FM mode/BP button (FM MODE/BP)	15, 19
⑯	Sleep button (SLEEP)	24
⑯	Disc button (DISC)	12
⑯	Repeat button (REPEAT)	12
⑯	Random button (RANDOM)	12

## Setting the time

This is a 12-hour display clock.

This example in the figure shows how to set the time for 4:25p.m..



**1** Switch on the power.

**2** Press [CLOCK/TIMER] to select "CLOCK".

Every time you press the button:

CLOCK → ⓁPLAY → ⓁREC

↑ Previous display ↓

**3** (within 7 seconds or so)

Press [ $\blacktriangleleft/\triangleright$ /REW/V] or [ $\wedge/\triangleright/\blacktriangleright$ ] to show the present time.

**4** Press [CLOCK/TIMER] to finish setting the time.

The display will return to whatever was displayed before you set the time.

To display the time when system is ON

Press [CLOCK/TIMER] to select "CLOCK".

The time will be displayed for about 5 seconds and then the display will return to whatever was previously displayed.

### Note

The clock may lose or gain some time over a period. Readjust if necessary.

## A Turning the demo function off

If the clock has not been set, a demonstration of the display is shown when the unit is switched to standby.

This function is set to on at the time of purchase.

**Press and hold [-DEMO] until "NO DEMO" is displayed.**

This display changes each time the button is held down.

NO DEMO (off) ↔ DEMO (on).

## B Auto-off function

### by remote control only

When CD or tape is selected as the source

To save power, the unit turns off if it is left unused for ten minutes.

### Note

This function does not work if the source is tuner or AUX.

**Press [AUTO OFF].**

"AUTO OFF" is shown on the display.

### To cancel

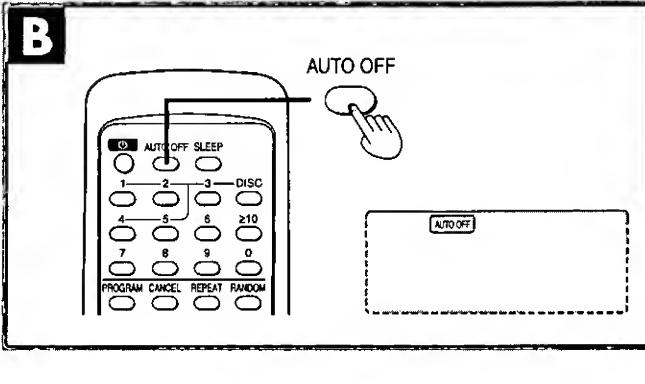
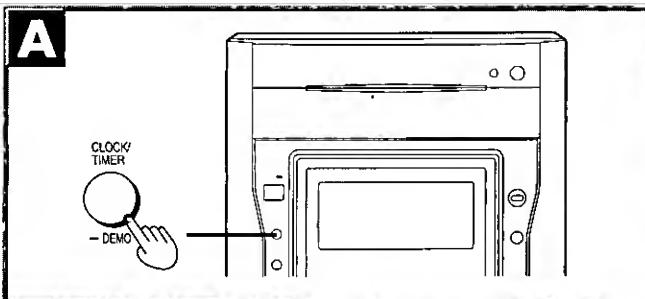
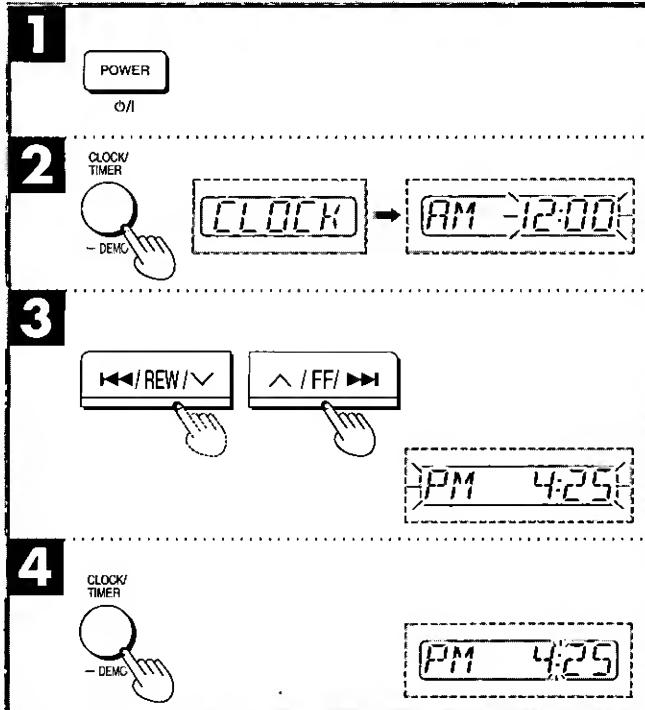
Press [AUTO OFF] again to clear "AUTO OFF" from the display.

### For your reference

The setting is maintained even if the unit is turned off. When the unit is turned on again, "AUTO OFF" is displayed and the unit functions as described above.

"AUTO OFF" disappears from the display if either tuner or AUX is selected as the source but continues to function normally.

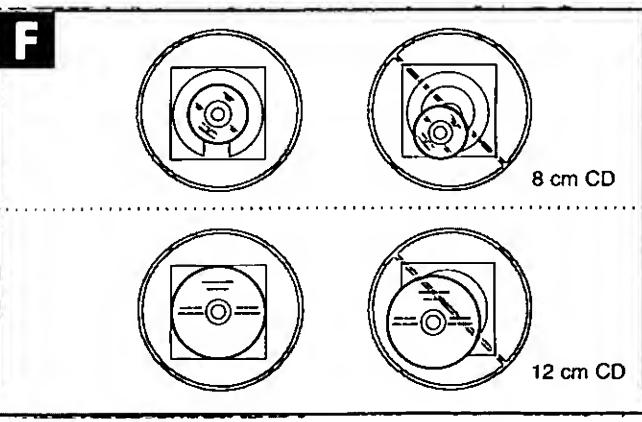
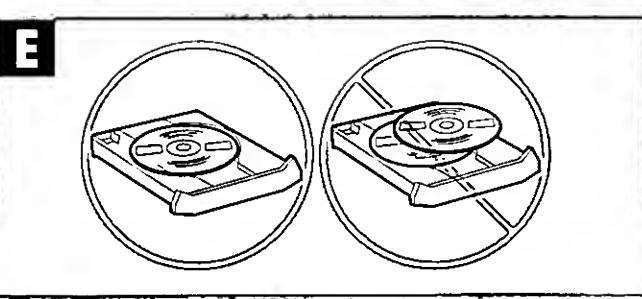
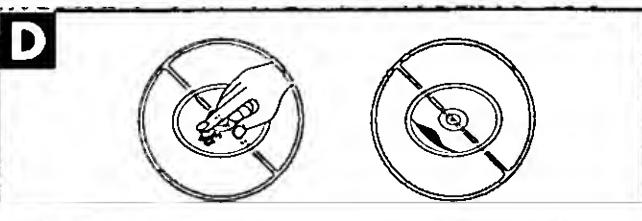
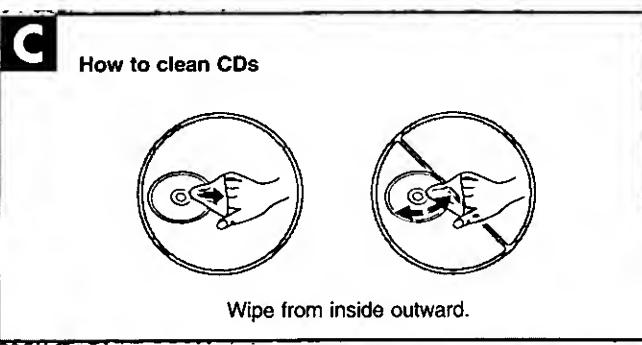
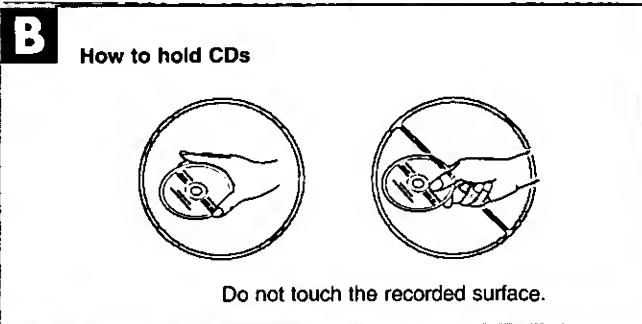
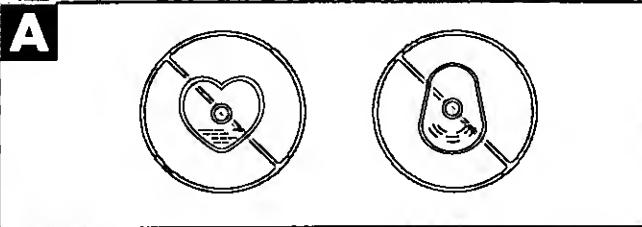
"AUTO OFF" remains displayed if CD or tape is selected as the source.



**Concerning compact discs**

With this system, you can only play compact discs having this mark.

- A** However, do not use irregular shaped CDs.  
CDs of the sort can damage the unit.

**B ~ D Handling precautions**

- If you are taking the disc from a cold to a warm environment, moisture may form on the disc. Wipe this off with a soft, dry, lint-free cloth before using the disc.
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not attach labels or stickers to CDs. (Do not use CDs with exposed adhesive from tape or left over peeled off stickers.)
- Do not use scratch-proof protectors or covers other than those specified for use with this system.
- Do not use CDs printed with label printers available on the market.

**Storage precautions**

Be sure to store discs in their cases to protect them from dust, scratches, and warping.

**Do not place or store discs in the following places**

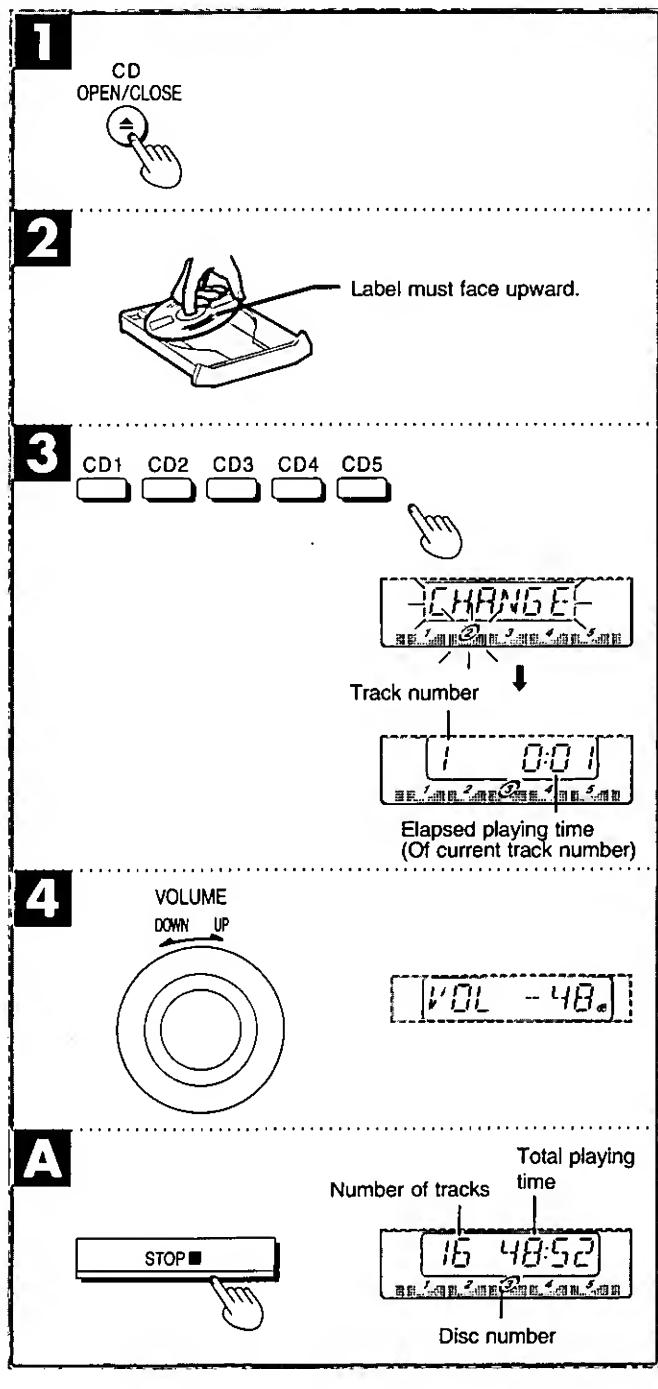
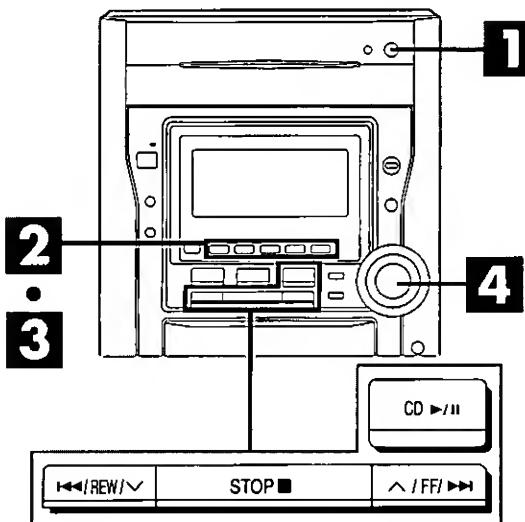
- Locations exposed to direct sunlight
- Humid or dusty locations
- Locations directly exposed to a heat vent or heating appliance
- In the glove compartment or on the rear deck of an automobile

**To prevent damage**

Always observe the following points.

- **E** Load only 1 CD on the tray.
- **F** Load CDs as shown in figure  
The adapter is not needed with 8 cm CDs (singles).
- Set the system on a flat, level surface.  
Do not set it on top of magazines, inclined surfaces, etc.
- Do not move the system while tray is opening/closing, or when loaded.  
Always unload all CDs before moving the system.
- Do not put anything except CD in tray.
- Do not use cleaning CDs or CDs which are badly warped or cracked.
- Do not disconnect the power cord from the household AC outlet during disc changing operation.

## Listening to compact discs



This unit can play CD-DA format audio CD-R and CD-RW that have been finalized\* upon completion of recording.

It may not be able to play some CD-R or CD-RW due to the condition of the recording.

\* Finalizing is a process that enables CD-R/ CD-RW players to play audio CD-R and CD-RW.

### 1 Press [ $\Delta$ CD OPEN/CLOSE].

The unit will come on automatically and the tray opens.

### 2 Set CD in the tray.

To continue loading CDs in the other trays

Press another [(CD 1) ~ (CD 5)] to select the required tray and press [ $\Delta$  CD OPEN/CLOSE] to open the tray.

The current tray closes and the selected tray automatically opens.

Press [ $\Delta$  CD OPEN/CLOSE] to close the tray.

### 3 Press [(CD 1) ~ (CD 5)] to play your desired disc.

(If the desired CD is indicated on the display panel, the same operation can be accomplished by pressing [CD  $\blacktriangleright/\text{II}$ ].)

Play will start from the first track on the disc and will continue until the last track of the final disc is played (see below).

### 4 Adjust the volume.

#### A To stop the disc play

Press [STOP ■].

What is meant by "final disc"?

For example, if play starts from disc 4, disc 3 will be the "final disc".

Order of progression:

Disc 4→5→1→2→3

#### One touch play

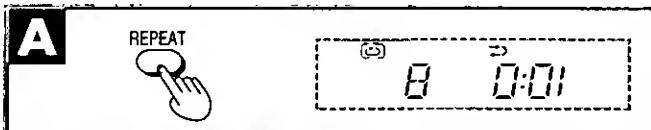
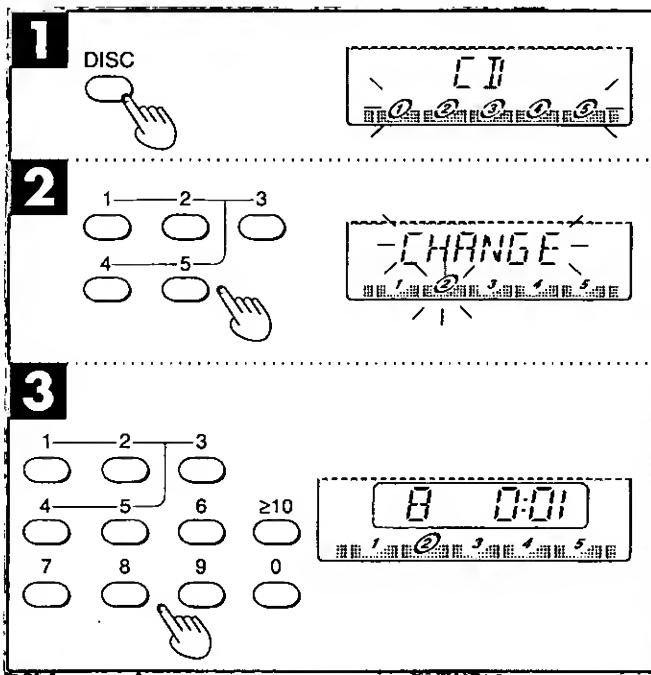
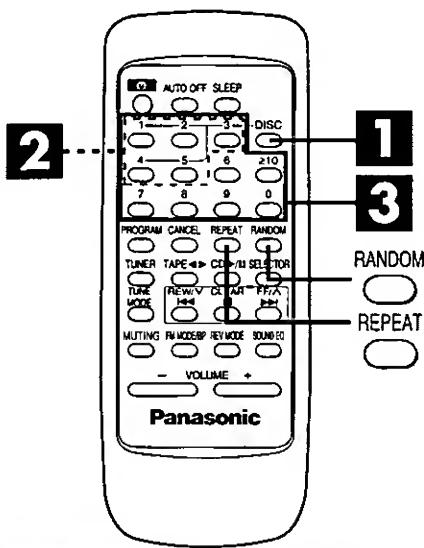
If the unit is in standby mode and a CD is loaded, press [CD  $\blacktriangleright/\text{II}$ ] or [(CD 1) ~ (CD 5)].

The unit will come on automatically and play will start.

To pause	Press [CD $\blacktriangleright/\text{II}$ ] during playback. To resume playback, press [CD $\blacktriangleright/\text{II}$ ].
To search forward/backward (Search)	Hold down [ $\blacktriangleleft/\text{REW}/\vee$ ] (backward) or [ $\wedge/\text{FF}/\blacktriangleright/\text{I}$ ] (forward) during playback or pause mode.
To skip forward/backward	Press [ $\blacktriangleleft/\text{REW}/\vee$ ] (backward) or [ $\wedge/\text{FF}/\blacktriangleright/\text{I}$ ] (forward) during playback or pause mode.

#### Notes

- During random play (→ page 12), you cannot skip to tracks which have already been played.
- During program play (→ page 13) or random play, you can search forward or backward only within the current track.
- During program play, skipping is always in the programmed order, whether forward or backward.
- Always stop the changer before loading or changing CDs. You cannot change CDs while a disc is playing.



## Direct access play

by remote control only

**1** Press [DISC].

**2** (within 10 seconds or so)  
Press [1] – [5] to select the disc you want.

**3** Press the numeric button to select the desired track number.

The CD will be played from the selected track to the last track of the final disc (→ page 11).

## To select a two-digit track

Press [ $\geq 10$ ] and then the two numbers you want within 10 seconds or so.

For example

Track no. 20: [ $\geq 10$ ] → [2] → [0]  
Track no. 35: [ $\geq 10$ ] → [3] → [5]

## Repeat play

by remote control only

**A** Press [REPEAT] before or during play.  
All tracks on the loaded CDs are repeated.

## To cancel repeat play

Press [REPEAT] once again.

## To repeat your favorite tracks

1. Program the tracks you want (perform steps 1 ~ 6 on page 13).
2. Press [REPEAT] and make sure "CD" is displayed.
3. Press [CD ▶/II]. Playback will start.

## To repeat just one track

Set the 1-TRACK mode (→ page 14), press [REPEAT] before or during playback, and make sure "CD" is displayed.

## Random play

by remote control only

**B** Press [RANDOM].

Every time you press the button:

1-DISC → ALL

↑ Previous display ↓

## To random play just one disc

Select the CD you want to random play with [(CD 1) ~ (CD 5)] and press [RANDOM] to select "1-DISC".

## To random play all the loaded CDs

Press [RANDOM] to select "ALL".

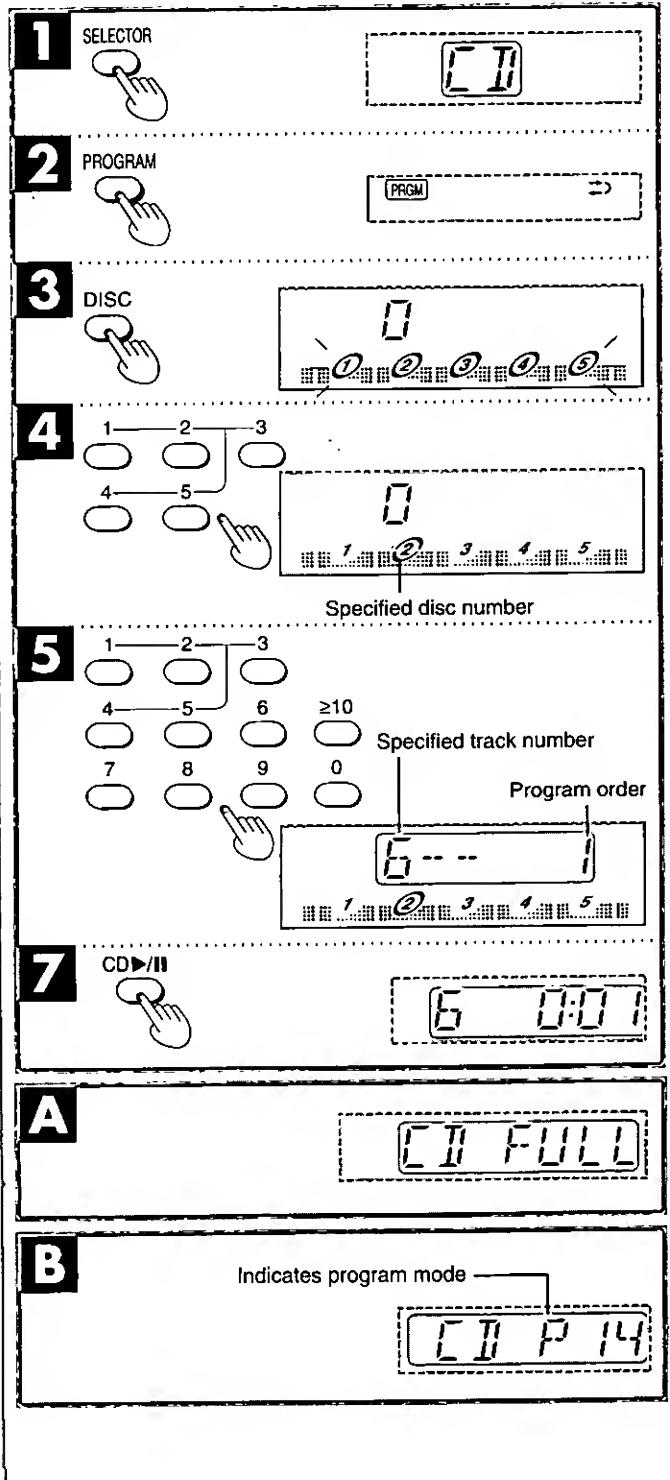
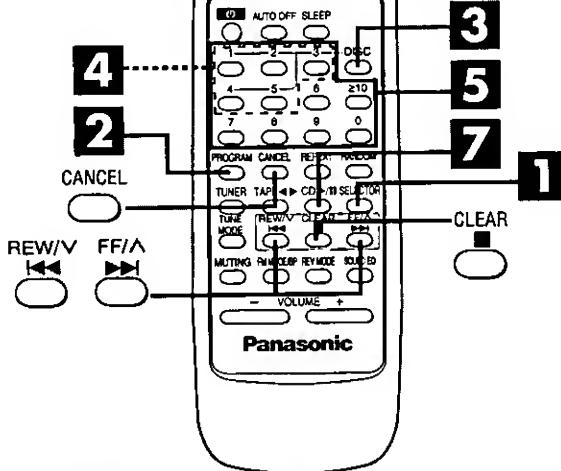
All tracks on the CD(s) will be played in random order. Playback will stop automatically when all tracks have been played.

## To cancel random play

Press [RANDOM] to clear "RANDOM" display.

### Note

You can use random play with your program. Only the programmed tracks will be played, but in random order.

**Listening to compact discs****Program play****by remote control only**

You can program up to 24 tracks.

**1** Press [SELECTOR] to select "CD".

Every time you press the button:

CD → TAPE → TUNER → AUX  
↑

**2** Press [PROGRAM].

**3** Press [DISC].

**4** (within 10 seconds or so)

Press [1] – [5] to select the disc you want.

**5** Press the numeric button to select the desired track.

**6** Repeat steps **3** through **5** until you have programmed all the tracks you want.

**7** Press [CD ▶/II].

Play will start in the programmed sequence.

**To cancel program play mode**

Press [PROGRAM] in the stop mode.

Programmed contents will be saved in memory.

Pressing [CLEAR] will cancel program play, but it will also erase the entire program.

**To select a two-digit track**

Press [&gt;10] and then the two numbers you want.

**A** When "CD FULL" appears

The number of programmed tracks is limited to 24. No further tracks can be programmed.

**B** You can do the following during program mode

- Check program contents.

Press [&lt;◀◀] or [&lt;▶▶]].

Every time you press one of the buttons, the track and program No. are shown on the display.

- Add to the program.

Repeat steps **3** through **5**.

- Cancel entries.

From the last programmed track	Press [CANCEL].
A specified track only	Select the track with [<◀◀] or [<▶▶]], and press [CANCEL] within 3 seconds.
All tracks	Press [CLEAR].

**Memory retention**

Your program is retained in memory for about 2 weeks while the system is unplugged.

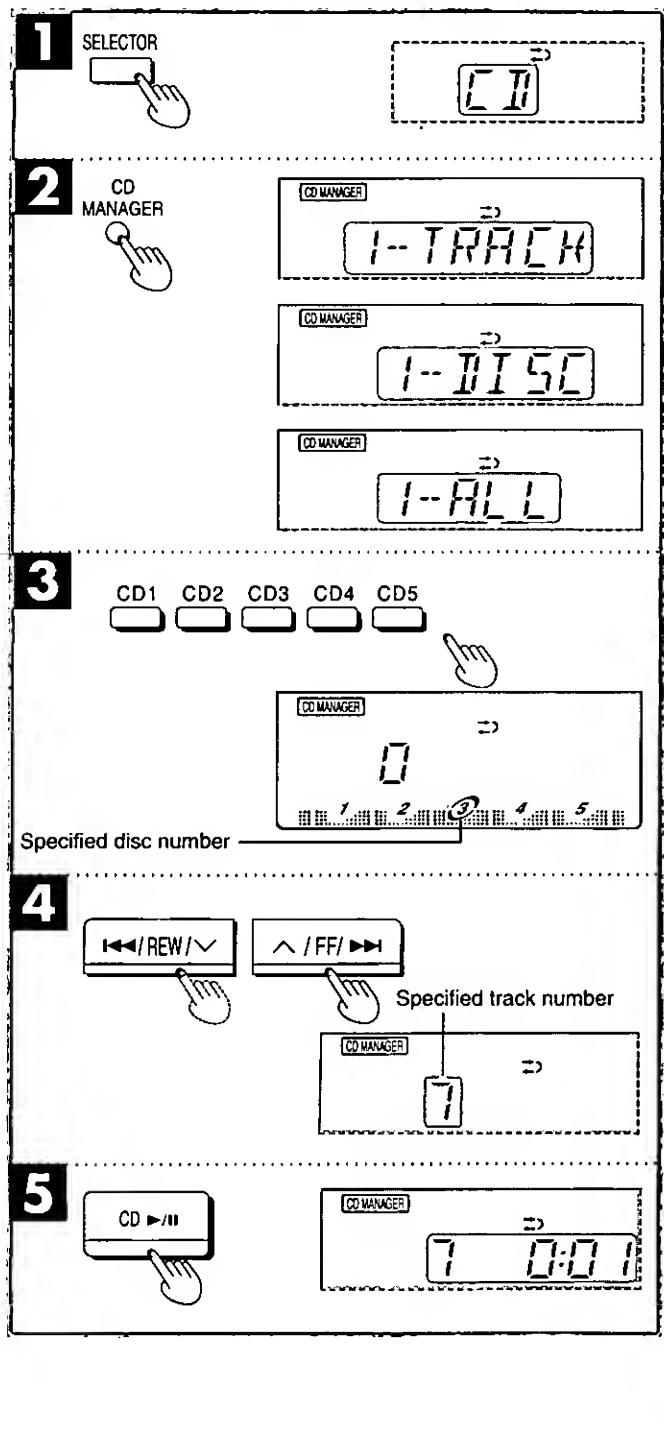
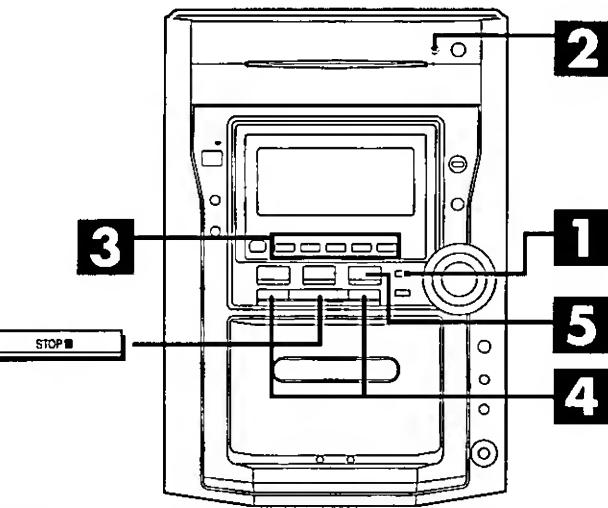
**To replay your program**

If you turned OFF your program with [PROGRAM], you can play it again as explained below.

1. Press [PROGRAM].
2. Press [CD ▶/II].

**If you program a track not on your CDs**

The track is initially programmed, but during program play, the player will skip that track and will continue playing from the next programmed item.



### To listen to special CDs and tracks (CD Manager function)

This function makes it easier for you to select special CDs and tracks from amongst those loaded in the player.

You can use this function to make recordings as well.

**There are 3 CD/track selection modes.**

- For playing back 1 track only from all loaded CDs  
1-Track mode (1-TRACK)
- For playing back 1 CD only from all loaded CDs  
1-Disc mode (1-DISC)
- For playing back 1 track on all loaded CDs  
1-Track All-Disc mode (1-ALL)

**1** Press [SELECTOR] to select "CD".

**2** Press [CD MANAGER] to select the desired mode.

Every time you press the button:

1-TRACK → 1-DISC → 1-ALL

↑ NORMAL ↓

(OFF)

1-TRACK: Only one particular track is played.

1-DISC: The tracks on only one particular disc are played.

1-ALL: The same track numbers on each of the CDs are played in succession.

(NORMAL: The original display is restored in about 3 seconds.)

**3** Press [(CD 1) ~ (CD 5)] to select the disc you want.  
**Note**

This step is not required if 1-ALL was selected in step **2**.

**4** Press [ $\ll$ /REW/ $\vee$ ] or [ $\wedge$ /FF/ $\gg$ ] to select the desired track.  
**Note**

This step is not required if 1-DISC was selected in step **2**.

**5** Press [CD  $\gg$ /II].

The selected track will start.

To stop play

Press [STOP ■].

When playback ends

"NORMAL" will appear on the display for about 3 seconds, then the CD MANAGER function will turn OFF automatically.

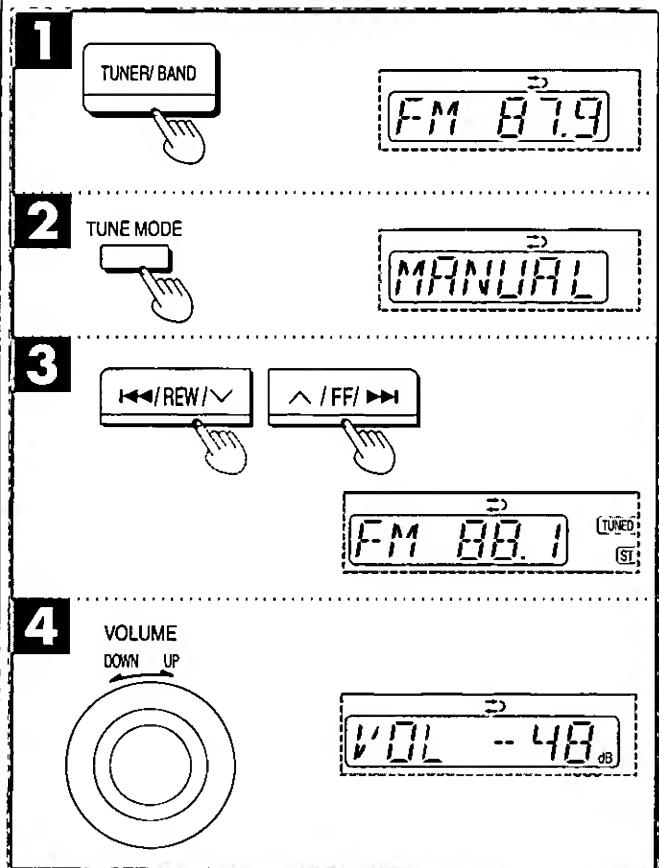
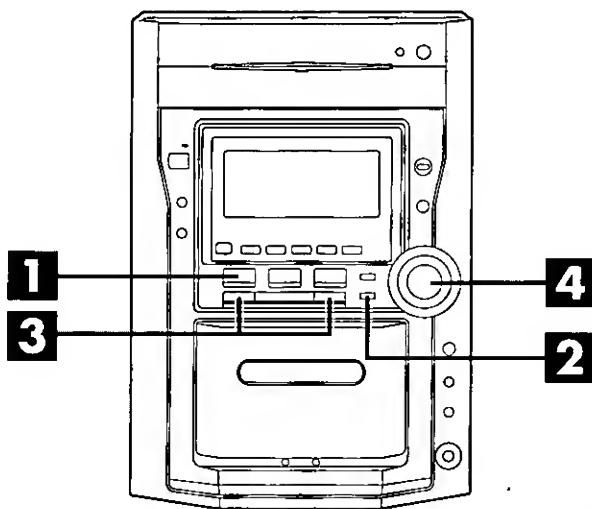
**During play in the 1-ALL mode:**

- It is not possible to skip back to a CD whose track has already been played.
- If a CD does not have the designated track number, it is skipped and play continues.

#### Notes

- You can use the CD Manager function together with repeat play.
- CD Manager function will be cancelled when you press the [RANDOM] button.

## Listening to radio broadcasts



**1** Press [TUNER/BAND] to select "FM" or "AM".

The unit comes on automatically.  
Every time you press the button:  
FM → AM

**2** Press [TUNE MODE] to select "MANUAL".

Every time you press the button:  
MANUAL → PRESET.

**3** Press [ $\blacktriangleleft/\text{REW}/\vee$ ] or [ $\wedge/\text{FF}/\blacktriangleright$ ] to select the frequency of the required station.

"TUNED" is displayed when a radio station is tuned.  
"ST" is displayed when a stereo FM broadcast is being received.

**4** Adjust the volume.

### Auto tuning

Press and hold [ $\blacktriangleleft/\text{REW}/\vee$ ] or [ $\wedge/\text{FF}/\blacktriangleright$ ] for a moment until the frequency starts changing rapidly. The unit begins auto tuning, stopping when it finds a station.

- Auto tuning may not function when there is excessive interference.
- To cancel auto tuning, press [ $\blacktriangleleft/\text{REW}/\vee$ ] or [ $\wedge/\text{FF}/\blacktriangleright$ ] once again.

### A If noise is excessive in FM

#### by remote control only

Press [FM MODE/BP] to display "MONO".

This mode improves sound quality if reception is weak, but broadcasts will be heard in monaural.

Press [FM MODE/BP] again to cancel the mode.  
"MONO" goes out. MONO is also canceled if the frequency is changed.  
Turn off "MONO" for normal listening. Stereo and monaural broadcasts are automatically played as they are received.

### FM allocation setting

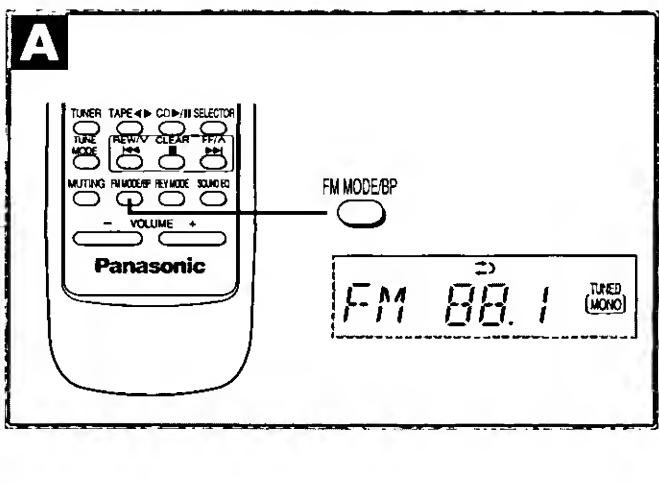
By adjusting the allocation, you can enable this tuner to receive FM broadcasts allocated in 0.1 MHz steps.

Press and hold [TUNER/BAND]. After a few seconds, the display will change to a flashing display of the current minimum FM frequency. If you continue to hold the button down, the minimum frequency will change. Release the button at this time.

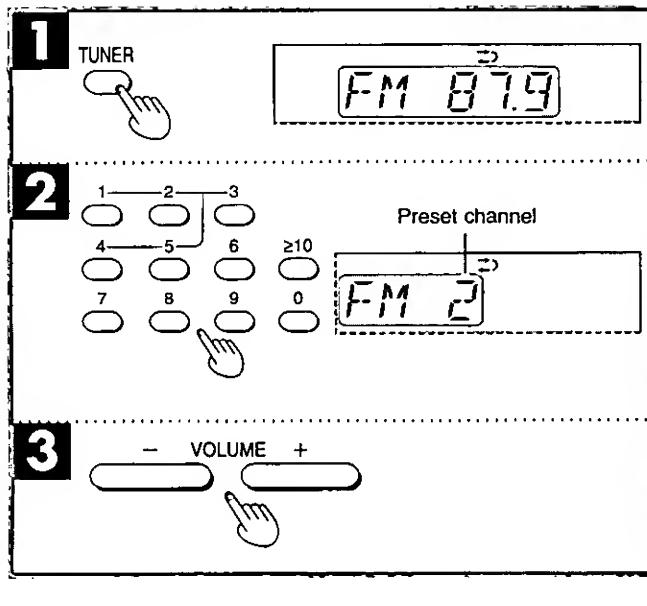
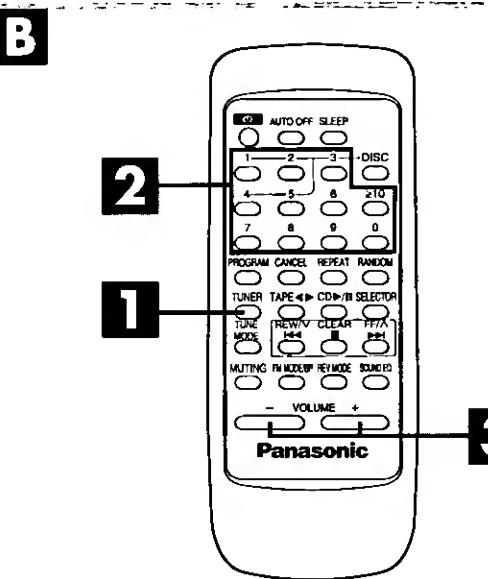
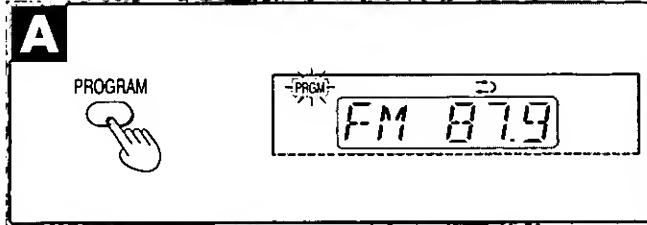
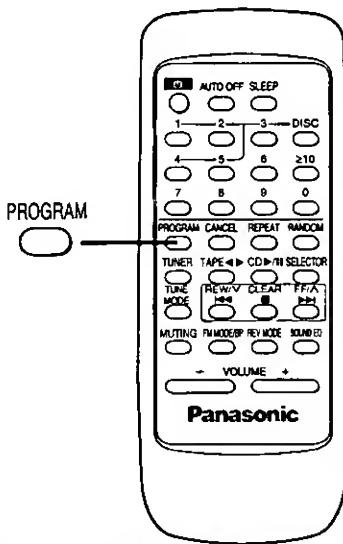
To return to the original frequency indication, repeat above.

#### Note

- After changing the "allocation" setting, the frequencies you previously preset in the memory will be cleared.
- Sound is momentarily interrupted if you load/unload tapes while listening to an AM broadcast.



## Presetting radio broadcasts



### by remote control only

There are two methods of presetting stations.

**Automatic presetting** : All the stations the tuner can receive are preset.

**Manual presetting** : You can select the stations to preset and the order they are preset in.

Up to 12 stations each can be set in the FM and AM bands.

### A Automatic presetting

Do the following once each for FM and AM.

#### Preparation:

Tune to the frequency where presetting is to begin (→ page 15).

#### Press and hold [PROGRAM].

Release the button when frequency begins to change.

The tuner presets all the stations it can receive into the channels in ascending order. When finished, the last station memorized is tuned in.

### Manual presetting

Preset the stations one at a time.

- ① Press [TUNER] to select "FM" or "AM".
- ② Press [PROGRAM] then press [ $\blacktriangleleft$ , REW/V] or [ $\triangleright$ , FF/ $\wedge$ ] to tune to the require station.
- ③ Press [PROGRAM] then press [ $\blacktriangleleft$ , REW/V] or [ $\triangleright$ , FF/ $\wedge$ ] to select a channel.
- ④ Press [PROGRAM].

The station occupying a channel is erased if another station is preset in that channel.

### B Selecting channels

- 1 Press [TUNER] to select "FM" or "AM".

The unit comes on automatically.

Every time you press the button:  
FM  $\rightleftharpoons$  AM

- 2 Press the numbered buttons to select the channel.  
• To enter channel 10 or over.  
Press [ $\geq 10$ ], then the two digits.

- 3 Adjust the volume.

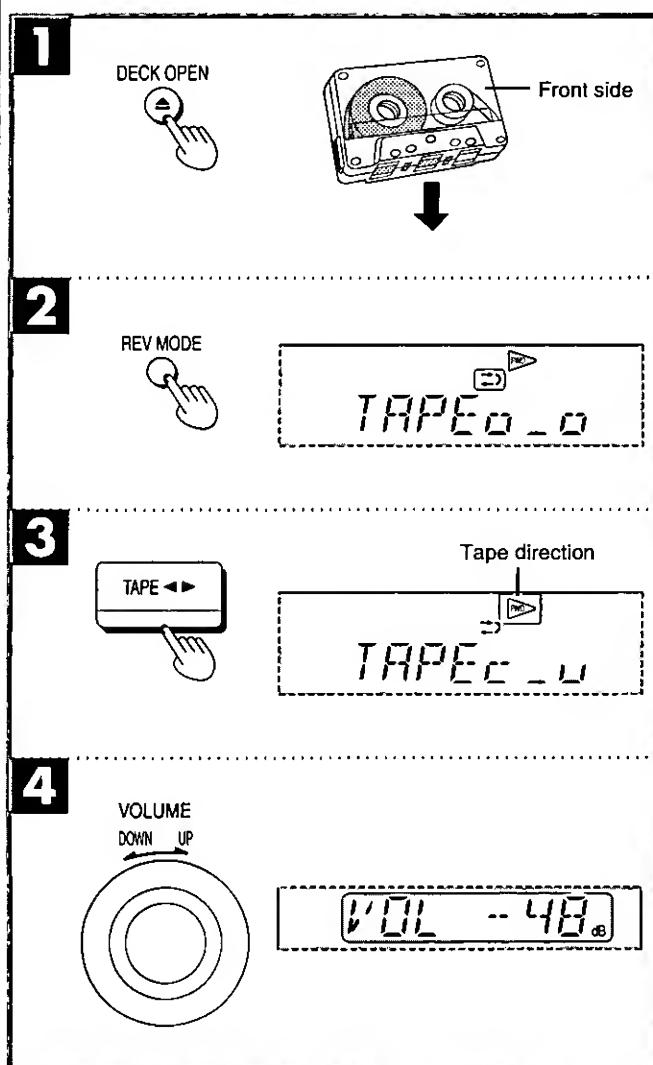
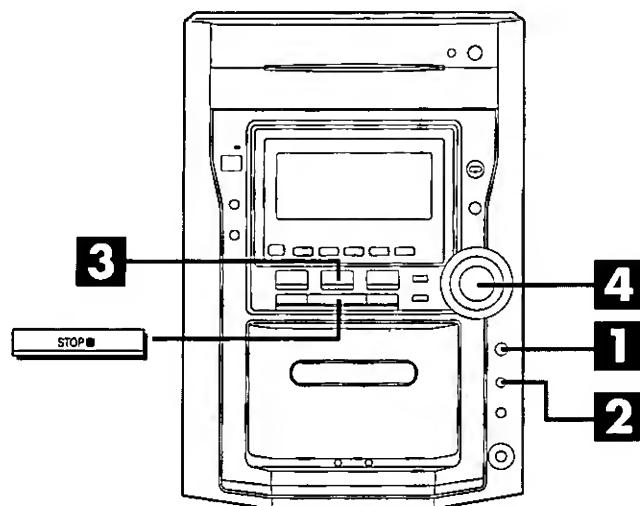
#### On the main unit

- ① Press [TUNER/BAND] to select "FM" or "AM".

- ② Press [TUNE MODE] to select "PRESET".

- ③ Press [ $\blacktriangleleft$ /REW/V] or [ $\wedge$ /FF/ $\triangleright$ ] to select the preset channel.

## Listening to tapes

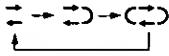


### 1 Press [ $\Delta$ DECK OPEN].

The unit will come on automatically.  
Insert the tape with the exposed tape facing down.  
Close the holder by hand.  
Tape direction is automatically set to " $\triangleright$ ".

### 2 Press [REV MODE] to select the reverse mode.

Every time you press the button:



$\rightarrow$  : One side is played.

$\leftrightarrow$  : Both sides are played.

$\overleftarrow{\overrightarrow{C}}$  : Both sides are played repeatedly until [STOP ■] is pressed.

### 3 Press [TAPE $\blacktriangleleft$ $\triangleright$ ] to start playback.

Every time you press the button:  $\blacktriangleleft \leftrightarrow \triangleright$

$\triangleright$  : The forward side (front side) will play.

$\blacktriangleleft$  : The reverse side will play.

### 4 Adjust the volume.

#### To stop tape playback

Press [STOP ■].

#### One-touch play

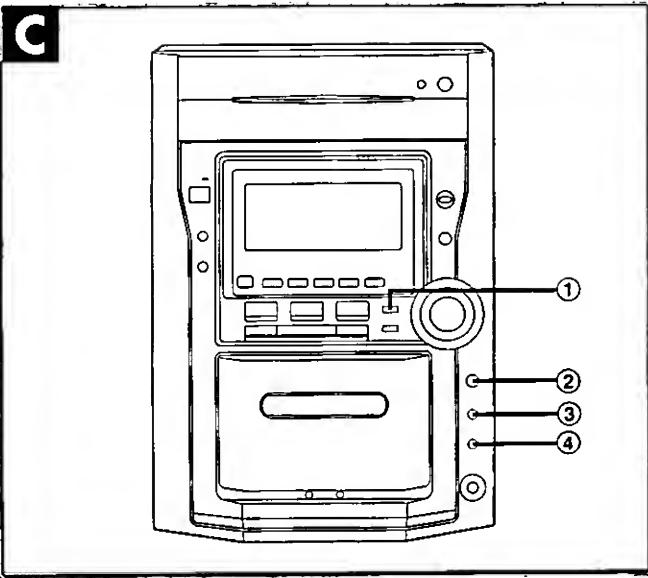
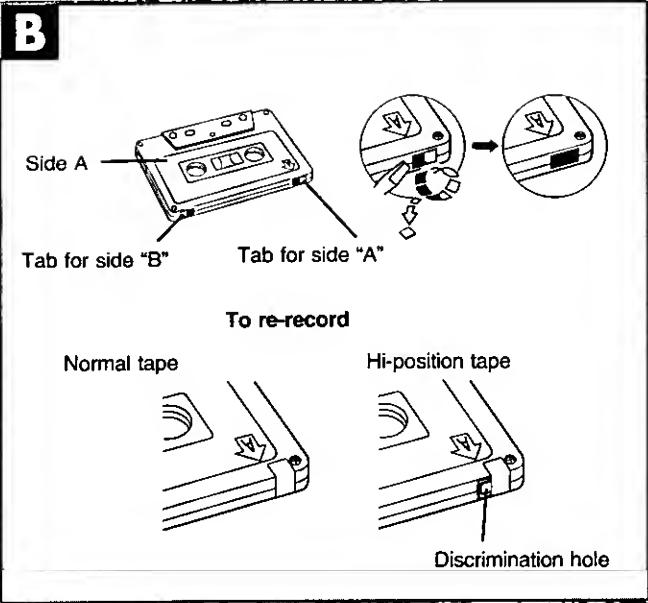
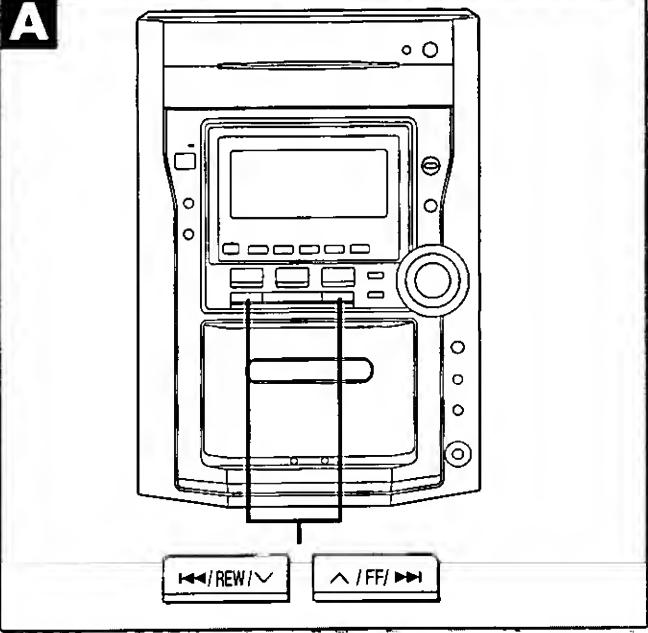
When the system is OFF and a tape is already inserted, play starts automatically when you press [TAPE  $\blacktriangleleft$   $\triangleright$ ].

### Cassette tape selection and care

The unit can correctly play the following types. It identifies the type automatically.

Normal position/TYPE I	✓
High position/TYPE II	✓
Metal position/TYPE IV	✓

- Tapes exceeding 100 minutes are thin and can break or get caught in the mechanism.
- Tape slack can get caught up in the mechanism and should be wound up before the tape is played.
- Endless tapes can get caught up in the deck's moving parts if used incorrectly. Use tapes appropriate to this unit's auto-reverse mechanism.

**Listening to tapes****A To fast-forward or rewind the tape**

Press [**[◀◀/REW/V]** or **[^/FF/▶▶]**] in the stop mode.

Tape direction	To rewind	To fast-forward
" <b>▼</b> "	<b>[◀◀/REW/V]</b>	<b>[^/FF/▶▶]</b>
" <b>▲</b> "	<b>[◀◀/REW/V]</b>	<b>[^/FF/▶▶]</b>

**A To find the beginning of a program  
(TPS: Tape Program Sensor)**

TPS finds the beginning of a track and resumes play from there. Each press increases the number of tracks skipped, up to a maximum of 9.

Press [**[◀◀/REW/V]** or **[^/FF/▶▶]**] during play.

**Notes**

The TPS function searches for silent parts of about 4 seconds in length which are normally found between tunes. As a result, it may not function properly in the following cases:

- With short silent parts
- When noise occurs between tunes
- With silent parts found within tunes

**Before recording****Selection of tapes for recording**

The unit automatically identifies the type of tape.

Normal position/TYPE I	✓
High position/TYPE II	✓
Metal position/TYPE IV	✗

Metal position tapes can be used, but the unit will not be able to record or erase them correctly.

**B Erasure prevention**

The illustration shows how to remove the tabs to prevent recording. To record on the tape again, cover as shown, being careful not to cover the high position discrimination hole.

**How volume, sound quality/ field affect recording**

- Recording level is set automatically.
- All sound effects are automatically set to flat.

**C Erasing recordings**

① Press [SELECTOR] to select "TAPE".

Every time you press the button:

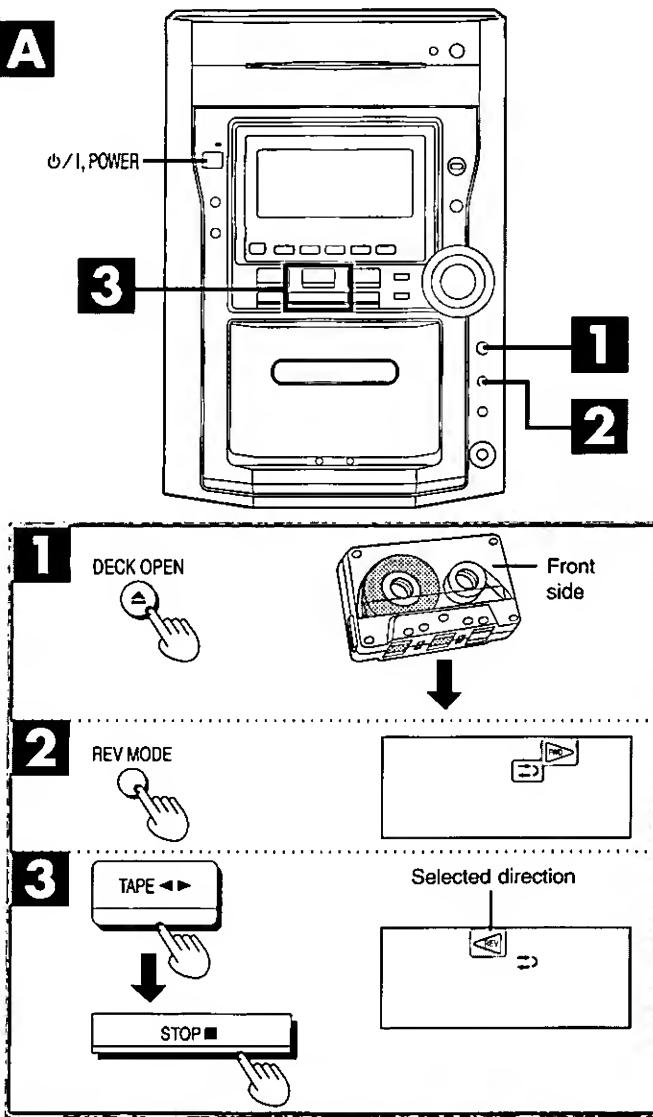
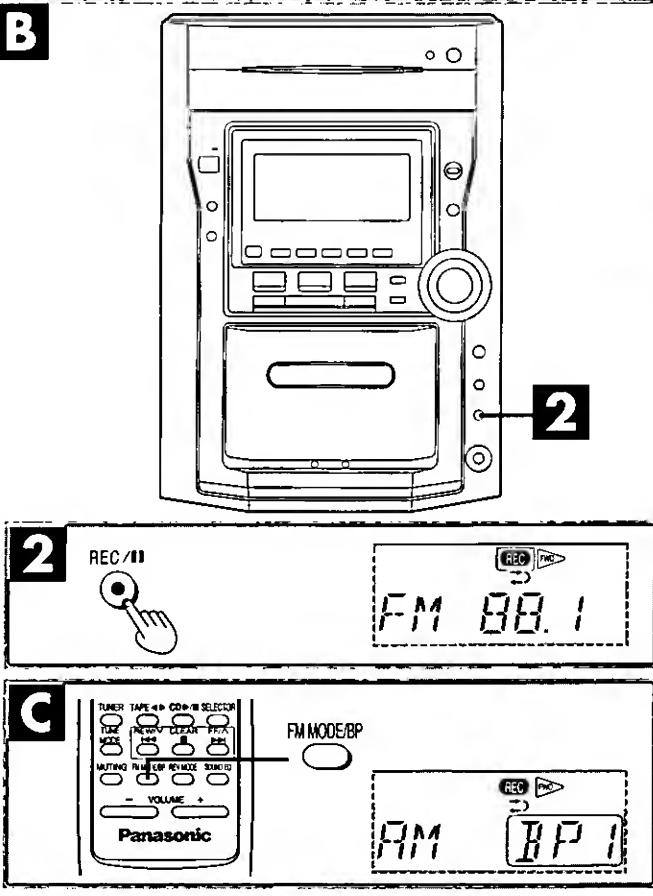
CD → TAPE → TUNER → AUX



② Insert the recorded tape into deck.

③ Press [REV MODE] to select the reverse mode.

④ Press [● REC/III].

**A****B****Before recording****A Preparatory steps**

Do these steps before each recording.  
Wind up the leader tape so recording can begin immediately.

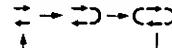
Preparation: Press [ $\odot/I$ , POWER] to turn the unit on.

**1** Press [ $\Delta$  DECK OPEN] and insert the cassette to be recorded on.

Insert with the tape facing down.

**2** Press [REV MODE] to select the reverse mode.

Every time you press the button:



$\Rightarrow$  : One side only records.

$\Rightarrow \leftarrow \rightarrow$  : Both sides record (forward  $\rightarrow$  reverse).

" $\rightarrow \leftarrow \rightarrow$ " automatically changes to " $\leftarrow \rightarrow$ " when [ $\bullet$  REC/II] is pressed.

**3** Set the tape direction.

$\Rightarrow$  : To record on the forward side.

$\leftarrow$  : To record on the reverse side.

To change the direction

Press [TAPE  $\blacktriangleleft \blacktriangleright$ ] twice and then [STOP ■].

**B Recording the radio**

Preparation: Do the preparatory steps above.

**1** Tune to the required station.  
( $\leftarrow$  page 15 or 16).

**2** Press [ $\bullet$  REC/II] to start recording.

To stop recording

Press [STOP ■].

To pause recording

Press [ $\bullet$  REC/II]. Press [ $\bullet$  REC/II] again to resume play.

**c** To reduce noise while recording an AM broadcast (Beat proof function)

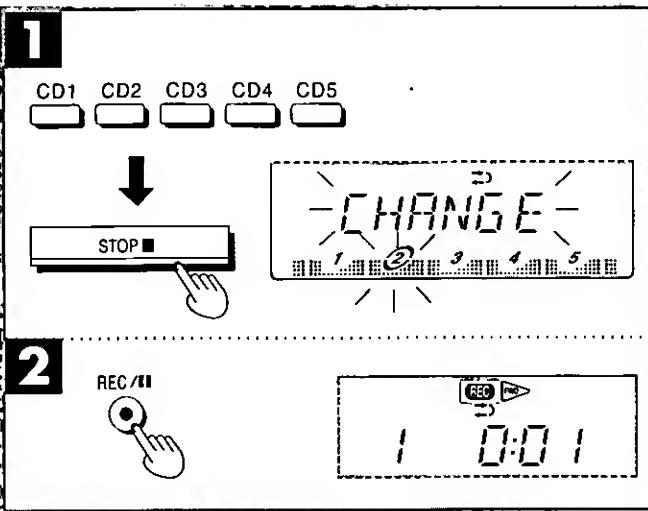
by remote control only

Press [FM MODE/BP] while recording.

Every time you press the button:

BP1  $\leftrightarrow$  BP2

Select the position where there is less noise.

**1****2**

## Recording discs

### Preparation:

- Do the preparatory steps (→ page 19).
- Press [SELECTOR] to select disc as the source and insert the disc(s) you want to record (→ page 11).

### Normal recording

**1** Press [(CD 1) ~ (CD 5)] to select the disc to be recorded, then [STOP ■] to stop play.

**2** Press [● REC/II] to start recording.  
The CD starts.

### To stop recording

Press [STOP ■].

The CD stops, and the tape stops after making a 4 second silent interval.

### To record programmed tracks

① Program the tracks (→ page 13).

② Press [● REC/II] to start recording.

Play starts.

To stop recording, press [STOP ■].

Disc play stops automatically.

### Recording with CD Manager (→ page 14)

Record discs after selecting the required CD MANAGER mode (1-TRACK, 1-DISC, 1-ALL)

- If a track is cut off in the middle at the end of the front side while recording, the track will be recorded from the beginning on the reverse side.
- At the end of the reverse side, recording stops and the current track will be interrupted.
- Recording pauses while discs are changing and resumes when the disc is ready.

① Do steps 1 to 4 on page 14.

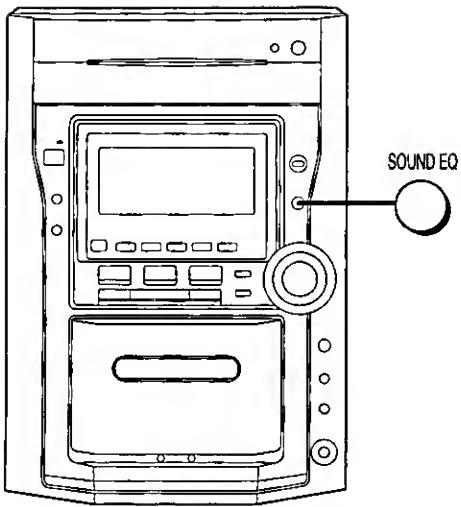
② Press [● REC/II] to start recording.

Play starts.

### To stop recording

Press [STOP ■].

Disc play stops automatically.

**A**

## A Using the built-in sound quality/sound field settings

Press [SOUND EQ] to select the sound quality or sound field. When it is pressed, the settings are selected in the following sequence.

### ① HEAVY (sound quality)

Select this when playing rock or other kinds of music that sound better with an added punch.

### ② CLEAR (sound quality)

Select this for jazz or other kinds of music for which clarity in the treble range is desired.

### ③ SOFT (sound quality)

Select this when listening to background music.

### ④ DISCO (sound field)

Select this to produce sound with the same kind of lengthy reverberations heard at a disco.

### ⑤ LIVE (sound field)

Select this to make vocals more alive.

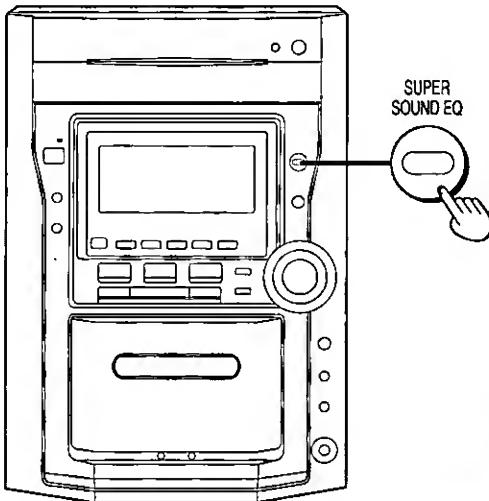
### ⑥ HALL (sound field)

Select this to add an expansiveness to the sound to produce the atmosphere of a great concert hall.

The original display is restored on the display panel in about 5 seconds.

#### Note

All recordings are performed at the flat setting even if an alternative sound quality/sound field setting has been selected.

**B**

## B Enhancing the sound quality

This feature enhances the bass and treble effect of the sound.

### Press [SUPER SOUND EQ].

Press the button again to cancel.

The button light goes out.

#### Note

You cannot record Super Sound EQ effect, but you can use it for playback sound.

## C To mute the volume

#### by remote control only

This feature is convenient when you have a telephone call, etc.

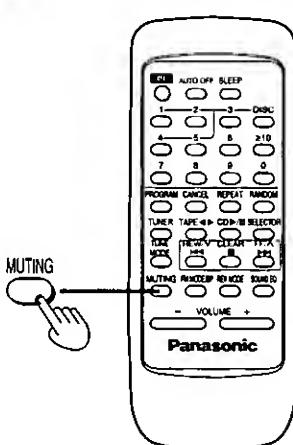
### Press [MUTING].

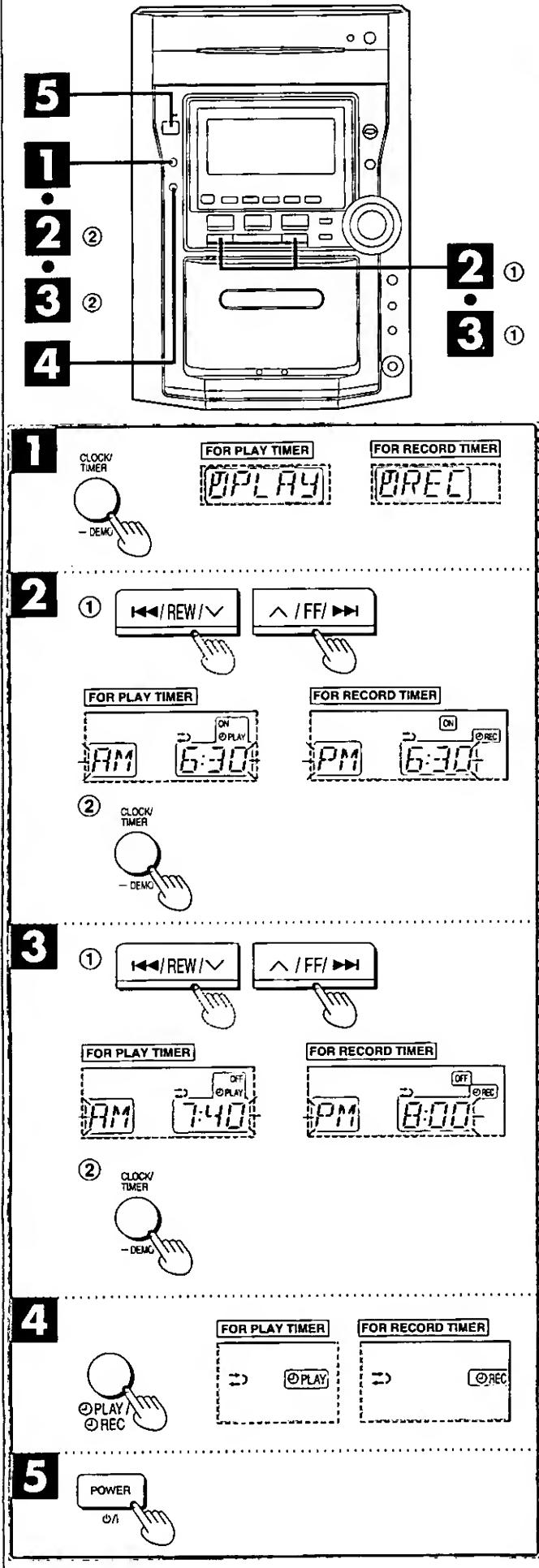
Press the button again to cancel.

"MUTING" goes out.

Muting can also be canceled by lowering the volume all the way (--dB).

When the system is turned off, the muting operation will be automatically canceled.





## Using the timer

### Using the play/record timer

The timer has two functions. It can be set to on at a certain time to wake you up, or it can be set to record the radio or from the aux source.

The play timer cannot be used in combination with the record timer.

#### Preparations:

- Turn the unit on and set the clock (→ page 9).
- For the play timer, prepare the music source you want to listen to; tape, CD, radio or aux, and set the volume.
- For the record timer, check the cassette's erasure prevention tabs (→ page 18: ②), insert the tape in deck, select the reverse mode (→ page 19) and tune to the radio station (→ page 15) or select the aux source (→ page 24).

#### 1 Press [CLOCK/TIMER] to select the timer function.

Every time you press the button:

CLOCK → ⓁPLAY → ⓁREC

← Previous display ←

ⓐPLAY : to set the play timer

ⓐREC : to set the record timer

### Setting the start and finish times

#### 2 (Within 8 seconds or so)

- ① Press [ $\blacktriangleleft/\text{REW}/\vee$ ] or [ $\wedge/\text{FF}/\blacktriangleright$ ] to select the starting time.
- ② Press [CLOCK/TIMER].

#### 3 ① Press [ $\blacktriangleleft/\text{REW}/\vee$ ] or [ $\wedge/\text{FF}/\blacktriangleright$ ] to select the finishing time.

- ② Press [CLOCK/TIMER].

The start and finish times are now set.

### Turning the timer on

#### 4 Press [ⓐPLAY/ⓐREC].

Every time you press the button:

ⓐPLAY → ⓁREC

← (OFF) ←

ⓐPLAY : to turn the play timer on

ⓐREC : to turn the record timer on

#### 5 Press [ⓐ/I, POWER] to turn the unit off.

The unit must be off for the timers to operate.

- For play timer

The timer play will start at the preset time with volume increasing gradually up to the volume level you preset.

- For record timer

The record timer comes on about 30 seconds earlier than the set time.

### To cancel the timer

Press [ⓐPLAY/ⓐREC] to clear the timer indicators from the display. The timer comes on at the set time everyday if the timer is on.

### To change the settings (when unit is on)

- To change the play/record times

Do steps ①, ②, ③ and ⑤.

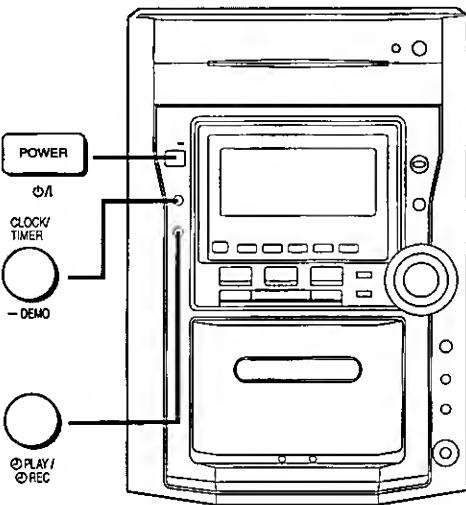
- To change the source or volume

1. Press [ⓐPLAY/ⓐREC] to clear the timer indicator from the display.

2. Make changes to the source or volume.

3. Do steps ④ to ⑤.

(Continued on next page)

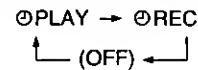


## Using the play/record timer

## To change the timer

Press [OPLAY/OREC] to select the desired timer (when the unit is on).

Every time the button is pressed the setting changes as follow:



## To check settings

While the unit is on and the "OPLAY" (or "OREC") indicator is on, press [CLOCK/TIMER] so "OPLAY" (or "OREC") appears on the display.

Two seconds after "OPLAY" (or "OREC") appear, the settings are displayed in the following order:

- For play timer
  - ① Play start time
  - ② Play finish time
  - ③ Play source
  - ④ Playback volume
- For record timer
  - ① Recording start time
  - ② Recording finish time
  - ③ Recording source

You can check the settings even when the system is OFF by pressing [CLOCK/TIMER].

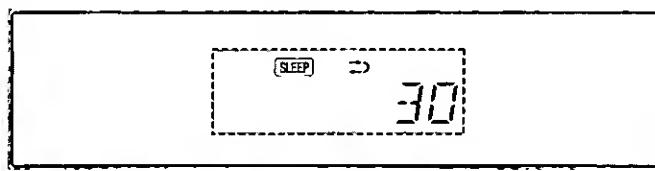
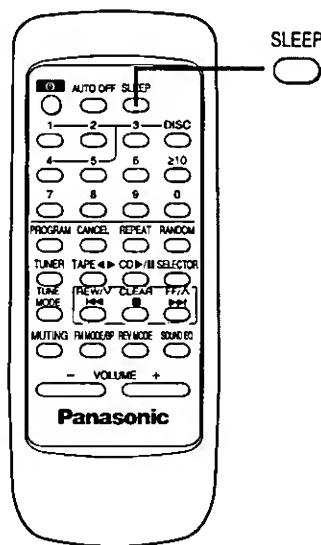
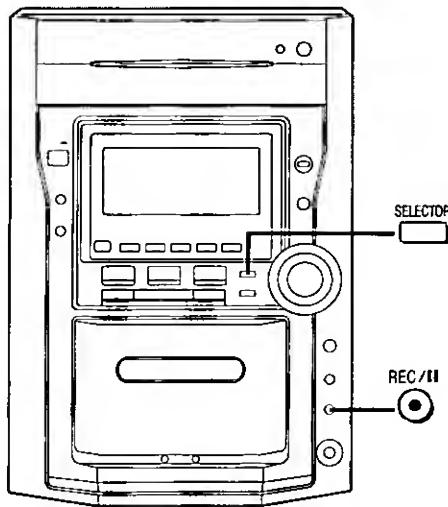
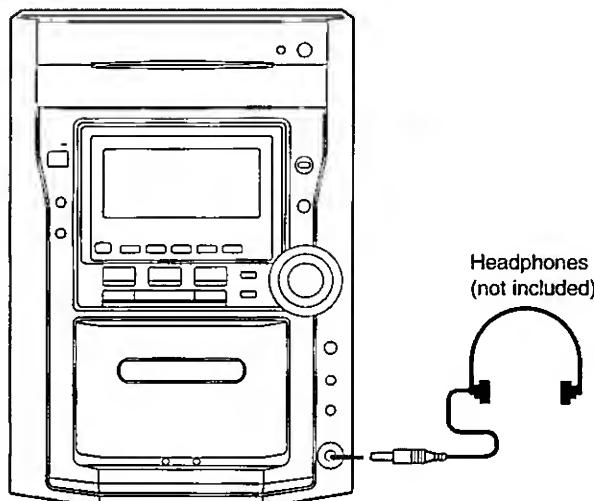
## To enjoy the desired source after the timer setting is completed

The volume level (for play timer) and music source are stored in the timer memory and the timer will start in these preset conditions. However, the Disc numbers and reverse mode do not get stored in the timer memory.

1. After step 4, start playing the desired source.
2. Reset the Disc numbers and reverse mode if you have changed any of them, confirm that a Disc or cassette is inserted, then press [ $\oplus/\ominus$ , POWER] to put the unit on standby.

## Notes

- If you switch the system to the standby mode while the play/record timer is functioning, the OFF time setting will not be activated.
- If AUX is selected as the source, when the timer comes ON, the system will turn ON and will engage "AUX" as the source. If you want to playback or record from a connected component, set the component's timer to the same time. (See the instruction manual that came with the component.)

**A****B****C**

## Using the timer

### A Using the sleep timer

This timer turns your system OFF at the set time (Max. 2 hours, settable at 30-minute intervals). It lets you fall asleep listening to music.

**by remote control only**

#### Preparation:

Switch on the power.

The figure shows how to set the system to standby mode after 30 minutes.

While enjoying the desired source:

**Press [SLEEP] to select the desired time.**

Every time you press the button:

→ 30 → 60 → 90 → 120 → OFF

The system is turned off after the set time has elapsed.

**To cancel the sleep timer:**

Press [SLEEP] to select "OFF".

**To confirm the remaining time:**

(only while system is ON)

Press [SLEEP].

**To change the time remaining during operation:**

Press [SLEEP] to show the remaining time then press [SLEEP] to select the desired time.

#### Notes

- The sleep timer turns OFF automatically the moment you attempt to edit-record a CD using CD Manager function.
- The sleep timer can be used in combination with the play/record timer.  
The sleep timer always has priority.  
Be sure not to overlap timer settings.

### B Using an external unit

#### Listening to an external source

(See page 7 for external unit connection)

1. Press [ $\odot/I$ , POWER] to turn the unit on.
2. Press [SELECTOR] to select "AUX".

Every time you press the button:

CD → TAPE → TUNER → AUX

3. Start playback from the external source. (For details, refer to the owner's manual of the equipment.)

#### Recording from an external source

1. Follow steps 1–3 on page 19.
2. Press [SELECTOR] to select "AUX".
3. Press [ $\bullet$  REC/II] (recording starts).
4. Start playback from the external source. (For details, refer to the owner's manual of the equipment.)

### C Listening with headphones

Reduce the volume level, and connect the headphones.

Plug type: 3.5 mm ( $\frac{1}{8}$ " stereo)

#### Note

Avoid listening for prolonged periods of time to prevent hearing damage.

## Troubleshooting guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

**For detailed instructions, contact an authorized servicenter in the U.S.A. and Panasonic Canada Inc. Customer Care Centre in Canada.**

**In the U.S.A., call 1-800-211-7262, e-mail consumerproducts@panasonic.com, or visit www.panasonic.com**

**In Canada, call 905-624-5505 or visit www.panasonic.ca**

Reference pages are shown as black circled numbers ①.

### Common Problems

No sound.	Turn the volume up. The speaker cables may be shorted. Turn the unit off, check and correct the connections and turn the unit on. ⑥
Sound is unfixed, reversed or comes from one speaker only.	Check the speaker connections. ⑥
Humming heard during play.	An AC power supply cord or fluorescent light is near the cables. Keep other appliances and cords away from this unit's cables.
"ERROR" is displayed.	Incorrect operation performed. Read the instructions and try again.
"---" appears on the display.	You plugged the power supply cord in for the first time or there was a power failure recently. Set the time. ⑨
"F61" is displayed.	Check and correct the speaker cords connection. If this does not fix the problem, there is a power supply problem. Consult the dealer.

### Listening to the radio

Noise is heard. The stereo indicator flickers or doesn't light. Sound is distorted.	Use an outdoor antenna. ⑦
A beat sound is heard.	Turn the TV off or separate it from the unit.
A low hum is heard during AM broadcasts.	Separate the antenna from other cables and cords.

### Where there is a television set nearby

The picture on the TV disappears or stripes appear on the screen.	The location and orientation of the antenna are incorrect. If you are using an indoor antenna, change to an outdoor antenna. The TV antenna wire is too close to the unit. Separate the antenna wire of the TV set from the unit.
---	--

### Using the cassette deck

Poor quality sound.	Clean the heads. Back cover
Recording is not possible.	If the erasure prevention tabs have been removed, cover the holes with adhesive tape. ⑩

### Playing discs

The display is wrong or play won't start.	The disc may be upside down. ⑪ Wipe the disc. Replace the disc if it is scratched, warped, or non-standard. Condensation may have formed inside the unit due to a sudden change in temperature. Wait about an hour for it to clear and try again.
"TAKE OUT/DISC" appears on the display.	There is a problem with the disc mechanism. (A power failure may have occurred.) The tray will open automatically. Remove the disc from the tray, and after ensuring there is no disc in the tray, close it. The unit will make the disc changing noises for a few moments and then it should operate normally.

### The remote control

The remote control doesn't work.	Check the batteries are inserted correctly. ⑫ Replace the batteries if they are worn.
----------------------------------	--

**Panasonic****Technics****Quasar**

*For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service inquiries please contact:*  
**1-800-211-PANA (7262), Monday-Friday 9 am-9pm; Saturday-Sunday 9 am-7pm, EST.**

**Web Site:** <http://www.panasonic.com>  
*You can purchase parts, accessories or  
 locate your nearest servicenter by visiting  
 our Web Site.*

**Accessory Purchases:**

**1-800-332-5368 (Customer Orders Only)**  
**Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032**  
 (6 am to 5 pm Monday-Friday; 6 am to 10:30 am Saturday; PST)  
 (Visa, MasterCard, Discover Card, American Express, Check)

<b>Factory Servicenters Locations</b>			
<b>CALIFORNIA</b> 6550 Katella Avenue Cypress, CA 90630	<b>GEORGIA</b> 8655 Roswell Road Suite 100 Atlanta, GA 30350	<b>MINNESOTA</b> 7850-12 <sup>th</sup> Avenue South Airport Business Center Bloomington, MN 55425	<b>TEXAS</b> 13615 Welch Road Suite 101 Farmers Branch TX 75244
800 Dubuque Avenue S. San Francisco CA 94080	<b>ILLINOIS</b> 1709 North Randall Road Elgin, IL 60123	<b>OHIO</b> 2236 Waycross Road Civic Center Plaza Forest Park, OH 45240	<b>WASHINGTON</b> 20425-84 <sup>th</sup> Avenue South Kent, WA 98032
3878 Ruffin Road Suite A San Diego, CA 92123	<b>MASSACHUSETTS</b> 60 Glacier Drive Suite G Westwood, MA 02090	<b>PENNSYLVANIA</b> 2221 Cabot Blvd. West Suite B Langhorne, PA 19047	
<b>FLORIDA</b> 3700 North 29 <sup>th</sup> Avenue Suite 102 Hollywood, FL 33020			<b>HAWAII</b> 99-859 Iwaiwa Street Aiea, Hawaii 96701 Phone (808) 488-1996 Fax (808) 486-4369

**Service in Puerto Rico**

**Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company/Factory Servicenter:**  
**Ave. 65 de Infanteria, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985**  
**Phone (787) 750-4300 Fax (787) 768-2910**

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Ave. 65 de Infantería, Km. 9.5  
San Gabriel Industrial Park, Carolina, Puerto Rico 00985

## **Panasonic/Technics Audio Products Limited Warranty**

Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the Warrantor") will repair or replace this product with new or refurbished parts or equivalent product, free of charge in the U.S.A. or Puerto Rico, in the event of a defect in materials or workmanship as follows (all time periods commence from the date of original purchase):

**AUDIO PRODUCTS**—labor and parts for one (1) year.

**ALL AUDIO RACKS** (cabinets)—parts only 30 days.

**TECHNICS STAND ALONE SPEAKERS, SUBWOOFER SPEAKERS**—labor and parts for three (3) years.

**USB READER-WRITER, PERSONAL COMPUTER CARD ADAPTERS**—

(when applicable)—exchange defective unit with a new or refurbished one for one (1) year.

**ACCESSORIES—HEADPHONES, CARTRIDGES, MICROPHONES, ADAPTERS**—labor and parts for ninety (90) days.

**RECHARGEABLE BATTERIES**—(when applicable)—exchange defective item for new one for ten (10) days. Non-rechargeable batteries are not warranted.

**SD MEMORY CARDS, RECHARGEABLE BATTERY PACKS**—(when applicable)—exchange defective item for new one for ninety (90) days. Non-rechargeable battery packs are not warranted.

Carry-in or mail-in service in the U.S.A. can be obtained during the warranty period by contacting a Panasonic Services Company (PASC) Factory Servicenter listed in the Servicenter Directory. Or call toll free, 1-800-211-7262 to locate a PASC authorized Servicenter. Carry-in or mail-in service in Puerto Rico can be obtained during the warranty period by calling the Panasonic Sales Company telephone number listed in the Servicenter Directory.

This warranty is extended only to the original purchaser. A purchase receipt or other proof of date of original purchase will be required before warranty service is rendered.

This warranty only covers failures due to defects in materials and workmanship which occur during normal use and does not cover normal wear to the stylus (when applicable) or a dealer installed cartridge or stylus. The warranty does not cover damages which occur in shipment or failures which are caused by products not supplied by the warrantor, or failures which result from accident, misuse, abuse, neglect, mishandling, faulty installation, misapplication, set-up adjustments, maladjustment of consumer controls, improper operation or maintenance, improper antenna, inadequate signal reception or pick-up, alteration, modification, power line surge, improper voltage supply, lightning damage, commercial use, such as; hotel, office, restaurant, or other business or rental use of the product, or service by anyone other than a PASC Factory Servicenter or a PASC authorized Servicenter, or damage that is attributable to acts of God.

### **LIMITS AND EXCLUSIONS**

There are no express warranties except as listed above.

THE WARRANTOR SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING WITHOUT LIMITATION, DAMAGE TO TAPES, RECORDS OR DISCS. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the Consumer Affairs Department at the company address indicated above.

### **If you ship the product**

Carefully pack and send it prepaid, adequately insured and preferably in the original carton.

Attach a postage-affixed letter, detailing the complaint, to the outside of the carton.

*Do NOT send the product to the Executive or Regional Sales offices. They are NOT equipped to make repairs.*

# Specifications

## AMPLIFIER SECTION

### Power output

10% Total harmonic distortion	
1 kHz, both channels driven	45W per channel (6Ω)
70Hz-16 kHz, both channels driven	40W per channel (6Ω)

### Input sensitivity

AUX	250mV
Input Impedance	13kΩ

## FM TUNER SECTION

Frequency range	87.9 – 107.9 MHz (200kHz steps)
	87.5 – 108.0 MHz (100kHz steps)
Sensitivity	2.5 μV (IHF)
S/N 26 dB	2.2 μV

### Antenna terminal(s)

75Ω (unbalanced)

## AM TUNER SECTION

Frequency range	520 – 1710 kHz (10kHz steps)
AM	
Sensitivity	560 μV/m

## CASSETTE DECK SECTION

Track system	4 track, 2 channel
Heads	
Record/playback	Solid permalloy head
Erasure	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100kHz
Erasing system	AC erase 100kHz
Tape speed	4.8 cm/s
Frequency response (+3dB, -6dB at DECK OUT)	
NORMAL (TYPE I)	50Hz – 13kHz
HIGH (TYPE II)	50Hz – 13kHz
S/N	50 dB (A weighted)
Wow and flutter	0.18% (WRMS)
Fast forward and rewind time	Approx. 120 seconds with C-60 cassette tape

## CD SECTION

Sampling frequency	44.1kHz
Decoding	16 bit linear
Beam source/wave length	Semiconductor laser/780 nm
Number of channels	Stereo
Frequency response	20Hz-20 kHz (+1, -2dB)
Wow and flutter	Below measurable limit
Digital filter	8fs
D/A converter	MASH (1 bit DAC)

## SPEAKER SECTION

Type	2 way speaker system
Speaker(s)	
Woofer	12cm (4 3/4") cone type
Tweeter	6cm (2 5/8") cone type
Impedance	6Ω
Input power	100W (Music)
Output sound pressure level	84dB/W (1.0 m)
Cross over frequency	5kHz
Frequency range	50Hz-22 kHz (-16 dB)
Dimensions (WxHxD)	150 x 260 x 267 mm (5 5/8" x 10 1/4" x 10 1/2")
Mass	2.5 kg (5.5 lb)

## GENERAL

Power supply	AC 120V, 60Hz
Power consumption	125W
Standby	0.6W
Dimensions (WxHxD)	200 x 260 x 345mm (7 7/8" x 10 1/4" x 13 15/32")
Mass	5.6 kg (12.3 lb)

### Notes:

1. Specifications are subject to change without notice.  
Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.



As an ENERGY STAR® Partner, Panasonic has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

## Maintenance

### If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.

If the surfaces are extremely dirty, use a soft cloth dipped in a soap-and-water solution or a weak detergent solution.

- Never use alcohol, paint thinner or benzine to clean this unit.
- Before using a chemically treated cloth, carefully read the instructions that came with the cloth.

### For a cleaner, crisper sound

Clean the heads regularly to assure good quality playback and recording.

Use a cleaning tape (not included).

## Product Service

Do not attempt to remove the cover(s) or repair the unit yourself. Refer servicing to qualified personnel only.

### Product information

For product service, product information or assistance with product operation, refer to the servicenter directory.

*In the U.S.A., contact the Panasonic Customer Call Center at 1-800-211-7262, or email consumerproducts@panasonic.com, or web site (<http://www.panasonic.com>).*

*In Canada, contact Panasonic Canada Inc. Customer Care Centre at 905-624-5505, web site ([www.panasonic.ca](http://www.panasonic.ca)), or an authorized Servicentre closest to you.*

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